

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/G 4/2  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
NOV 76

F/G 4/2

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1 OF 7  
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# SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO).

WEST AFRICAN AND SELECTED ISLAND COASTAL MARINE AREAS.

VOLUME 1,

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## SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (MONTHLY AND ANNUAL)

The SSMO series of coastal marine summaries is managed and produced by the Naval Weather Service Detachment, Asheville, N. C. for the Director, Naval Oceanography and Meteorology. A list of published SSMO's is contained in the catalogue part of the "Guide to Standard Weather Summaries and Climatic Services", NAVAIR 50-1C-534.

The data summarized in the following tables were obtained from Tape Data Family 11 (TDF-11) Marine Surface Observations. The development and maintenance of TDF-11 was primarily funded by the Naval Weather Service Command. The source of these marine surface observations was punched cards of weather observations taken aboard vessels of varying registry. These observations were recorded on magnetic tape in a common format. Elements not in WMO code were converted to this code where possible. Where this was not possible, the original data were retained within the tape record as supplemental data. A very limited quality control was attempted as the punched cards were converted to taped records and, where possible, missing psychrometric data were computed.

Before the tables are prepared, extreme values of selected parameters are scrutinized so that obvious errors can be excluded. This method is necessarily subjective since the only available record of many observations is the punched card from which the tape records were prepared. Frequently there

is no concrete evidence to prove or disprove the validity of questionable data.

Also, it should be noted that these data are based upon observations made by ships in passage. Such ships tend to avoid bad weather when possible, thus biasing the data file toward good weather samples.

Because the number of observations may vary from one table to the other, no absolute relationship exists between the tables. As an example, air temperature counts for Tables 13 and 17 may not be identical since only observations containing both air temperature and relative humidity were counted in Table 13 and only those with both temperature and air-sea temperature difference were counted in Table 17. No requirement for simultaneous recording of all elements was made.

The primary period of record is that period (extending back in time from the most recent data) during which eighty percent of the total number of observations were recorded. The overall period is the earliest to the latest observed data used in compiling the tables. Tables 18 and 19 were tabulated from selected decks only and the overall period indicates the period of record of this data source. The primary period for these tables is not shown.

### THE TABLES

This value may fall outside irregular areas.

Annual values are computed on the basis of the sum of the monthlies divided by the number of months.

Tables 1 through 19 appear in numerical order for each month, with the annual tables appearing after the tables for December. Tables 20 and 21 appear at the end of the entire series, after the annual summary for Table 19. The series of summaries appear in numerical order by area number.

Percentage frequencies are computed to hundredths and rounded to tenths. An asterisk (\*) indicates percentage frequency  $> 0$  and  $< .05$ . A value followed by a plus sign indicates greater than or equal to that value (8+ means 8 or greater). NH = low cloud amount (or middle cloud amount when low clouds are not present). The hours given in this publication are GMT.

The geographic position shown on the tables is the central position (centroid) of the observations within the area.

Table 1 - Percentage Frequency of Weather Occurrence by Wind Direction (8 pts.).

Table 2 - Percentage Frequency of Weather Occurrence by Hour (GMT).

Table 3 - Percentage Frequency of Wind Direction (8 pts.) by Speed and by Hour (GMT). This table includes mean wind speed (kts.) by direction (8 pts.).

Table 3A - Percentage Frequency of Wind Direction (8 pts.) by Speed and by Hour (GMT). This table includes mean wind speed (kts.) by direction.

Table 4 - Percentage Frequency of Wind Speed by Hour (GMT). This table includes mean speed by hour.

Table 5 - Percentage Frequency of Total Cloud Amount (Okta) by Wind Direction (8 pts.). This table includes mean cloud amount by wind direction.

Table 6 - Percentage Frequency of Ceiling Heights (feet, NH  $> 4/8$ ) and Occurrence of NH  $< 5/8$  by Wind Direction (8 pts.).

Table 7 - Cumulative Percentage Frequency of Occurrence of Ceiling Height (feet, NH  $> 4/8$ ) and Visibility (Nautical Miles).

Table 7A - Percentage Frequency of Low Cloud Amount (or Middle Cloud Amount if Low Clouds are not present), and Percentage Frequency of Sky Obscured. Amounts are in Oktas.

Table 8 - Percentage Frequency of Wind Direction (8 pts.) vs. Occurrence or Non-Occurrence of Precipitation at Observation Time with Varying Values of Visibility (Nautical Miles).

Table 9 - Percentage Frequency of Wind Direction (8 pts.) vs. Wind Speed (kts.) with Varying Values of Visibility (Nautical Miles).

Table 10 - Percentage Frequency of Ceiling Heights (feet, NH  $> 4/8$ ) and Occurrence of NH  $< 5/8$  by Hour (GMT).

Table 11 - Percentage Frequency of Visibility (Nautical Miles) by Hour (GMT).

Table 12 - Cumulative Percentage Frequency of Ranges of Visibility (Nautical Miles) and Ceiling Height (feet, NH  $> 4/8$ ) by Hour (GMT).

Table 13 - Percentage Frequency of Relative Humidity (%) by Air Temperature ( $^{\circ}$  F.).

Table 14 - Percentage Frequency of Wind Direction (8 pts.) by Air Temperature ( $^{\circ}$  F.).

Table 15 - Means, Extremes, and Percentiles of Air Temperature ( $^{\circ}$  F.) by Hour (GMT). Extreme temperatures are the one maximum and one minimum value appearing in the marine data file. The extremes may be unrepresentative due to sampling errors. Extrapolation from the percentile values usually gives a better estimate of expected extreme conditions.

Table 16 - Percentage Frequency of Relative Humidity (%) by Hour (GMT).

Table 17 - Percentage Frequency of Air Temperature ( $^{\circ}$  F.) and the Occurrence of Fog vs. Air-Sea Temperature Difference ( $^{\circ}$  F.).

Air-Sea Temperature Difference is:

Positive when the air is warmer than the sea surface; Negative when the air is cooler than the sea surface. In the table heading, the limits of the temperature ranges appear in a vertical arrangement along the top of the table.

Table 18 - Percentage Frequency of Surface Wind Speed (kts.) and Direction (8 pts.) vs. Sea Height (feet). Source deck 128 for which data are available from mid-1963 was used for these tables. This deck represents the latest and most complete homogeneous source of wave data available. Here, only sea waves generated by local winds in the vicinity of the observer are summarized.



Table 19 - Percentage Frequency of Wave Height (feet) vs. Wave Period (seconds). In this table when both sea and swell waves are present in an observation, the higher of the two is used. If both are the same height, the longer period is chosen. When only one of the wave groups is observed, either sea or swell, it is used in the summary. Swell waves are those generated by winds distant from the local area where the observation is taken.

Tables 1-19 appear together for each month and in the annual summary. The following two tables appear at the end of the entire series for each area.

Note: In this volume, percentage frequencies at specified hours of the day refer to percentages of observations taken at those hours, rather than percentages of observations taken at all hours. Data at adjacent hours are summarized with data at synoptic hours, i.e., data from 02 and 04 GMT are combined with data from 03 GMT.

Table 20 - Monthly and Annual Percentage Frequencies and Means of Sea Surface Temperature (° F.).

Table 21 - Monthly and Annual Sea Level Pressures (millibars). This table includes means by hour and for all hours, extreme values and percentile values.

| CONTENTS |                        |         |
|----------|------------------------|---------|
| AREA     | NAME                   | PAGES   |
| 1        | Azores                 | 1-79    |
| 2        | Madeira Islands        | 80-158  |
| 3        | Casablanca SW          | 159-237 |
| 4        | Canary Islands         | 238-316 |
| 5        | Central Spanish Sahara | 317-395 |
| 6        | Cape Blanc             | 396-474 |
| 7        | Cape Verde Islands     | 475-553 |
| 8        | Dakar                  | 554-632 |

Copies of this document are obtainable from the National Technical Information Service (NTIS), Springfield, Virginia 22161.

# DIRECTION AND WEATHER CODES

## CONVERSION OF WIND AND WAVE DIRECTION TO 8 POINTS

A reduced bias system was employed in converting wind and wave directions to 8 points. This method attaches weighting values to observations which overlap two different 8 point sectors and treats them as "decimal observation counts." These decimal quantities are rounded to whole numbers for presentation as "observational counts" in the tables. Figures 1-4 below show the 8 point system with other systems superimposed.

Note: Because of rounding, sub-total sums of "observation counts" may not equal grand totals.

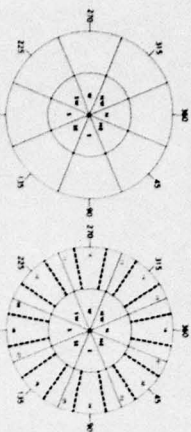


Fig 1 The 8 point direction system.

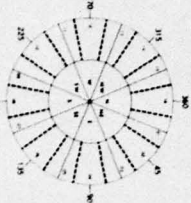


Fig 2 The 16 point direction system superimposed on the 8 point system.

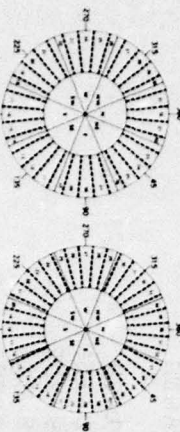


Fig 3 The 32 point direction system superimposed on the 8 point system.

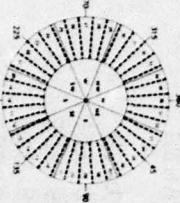


Fig 4 The 36 point direction system superimposed on the 8 point system.

## VISIBILITY (VV) INTERPRETATION (NAUTICAL MILES)

| CODE  | INTERPRETATION |
|-------|----------------|
| 90-93 | 1/2            |
| 94    | 1/2 < VV < 1   |
| 95    | 1 < VV < 2     |
| 96    | 2 < VV < 5     |
| 97    | 5 < VV < 10    |
| 98    | 10 < VV < 25   |
| 99    | VV ≥ 25        |

NOTE: < means less than;  
> means greater than;  
≤ means less than or equal to; ≥ means greater than or equal to.

## PRESENT WEATHER (1960 WMO CODE 4677)

| CODE  | INTERPRETATION             | CODE  | INTERPRETATION                        |
|---|----------------------------|-------|---------------------------------------|
| 58-59   | RAIN                       | 10-12 | FOG (WITHOUT PRECIPITATION)           |
| 60-65   |                            | 40-49 | FOG (WITHOUT PRECIPITATION) PAST HOUR |
| 91-94   |                            | 28    | FOG (WITHOUT PRECIPITATION) PAST HOUR |
| (68-69, 95, 97 IF TEMP > 40° F)                     |                            |       |                                       |
| 80-82, (83-84 IF TEMP > 40° F)                      | RAIN SHOWERS               | 04-05 | SMOKE                                 |
| 50-55, 58-59  | DRIZZLE                    |       | HAZE                                  |
| 56-57   | FREEZING PRECIPITATION     | 06-09 | SPRAY                                 |
| 66-67   |                            | 30-39 | BLOWING DUST BLOWING SNOW             |
| 70-75, 85-86 (68-69, 83-84, 95, 97 IF TEMP ≤ 40° F) | SNOW                       | 00-03 | NO SIGNIFICANT WEATHER AT OB TIME     |
|   |                            | 14-16 |                                       |
|   |                            | 18    |                                       |
| 76-79   | OTHER FROZEN PRECIPITATION | 00-49 | NO PRECIPITATION AT OB TIME           |
| 87-90   | HAIL                       |       |                                       |
| 93-94   |                            |       |                                       |
| 96, 99  |                            | 50-99 | PRECIPITATION AT OB TIME              |
| 13, 17  | THUNDER                    |       |                                       |
| 19, 29  | LIGHTNING                  |       |                                       |
| 95-99   | THUNDERSTORM               | 20-27 | PRECIPITATION PAST HOUR               |

NOTE: The following WMO codes were counted in two weather categories. 58-59 (rain and drizzle); 66-69 (rain and snow); 93-94 (rain and hail); 96 and 99 (hail and thunder/lightning/thunderstorm); 95 and 97 (snow and thunder/lightning/thunderstorm); or (rain and thunder/lightning/thunderstorm).



WAVE HEIGHT (from source decks 128 and 116)

| RECORDED<br>CODE<br>(HALF<br>METERS) | RANGE<br>(METERS) | AS RECORDED<br>IN TABULATION<br>(FEET) | RECORDED<br>CODE<br>(HALF<br>METERS) | RANGE<br>(METERS) | AS RECORDED<br>IN TABULATION<br>(FEET) | RECORDED<br>CODE<br>(HALF<br>METERS) | RANGE<br>(METERS) | AS RECORDED<br>IN TABULATION<br>(FEET) |
|--------------------------------------|-------------------|--|--------------------------------------|-------------------|--|--------------------------------------|-------------------|--|
| 00                                   | <.25}             | <1                                     | 12                                   | >5.75 to 6.25}    | 20-22                                  | 30                                   | >14.75 to 15.25}  | 49-60                                  |
| 01                                   | >.25 to .75}      | 1-2                                    | 13                                   | >6.25 to 6.75}    |  | 31                                   | >15.25 to 15.75}  |  |
| 02                                   | >.75 to 1.25}     | 3-4                                    | 14                                   | >6.75 to 7.25}    | 23-25                                  | 32                                   | >15.75 to 16.25}  |  |
| 03                                   | >1.25 to 1.75}    | 5-6                                    | 15                                   | >7.25 to 7.75}    |  | 33                                   | >16.25 to 16.75}  |  |
| 04                                   | >1.75 to 2.25}    | 7                                      | 16                                   | >7.75 to 8.25}    |  | 34                                   | >16.75 to 17.25}  |  |
| 05                                   | >2.25 to 2.75}    | 8-9                                    | 17                                   | >8.25 to 8.75}    | 26-32                                  | 35                                   | >17.25 to 17.75}  |  |
| 06                                   | >2.75 to 3.25}    | 10-11                                  | 18                                   | >8.75 to 9.25}    |  | 36                                   | >17.75 to 18.25}  |  |
| 07                                   | >3.25 to 3.75}    | 12                                     | 19                                   | >9.25 to 9.75}    |  |                                      |                   |  |
| 08                                   | >3.75 to 4.25}    | 13-16                                  | 20                                   | >9.75 to 10.25}   |  | 37                                   | >18.25 to 18.75}  | 61-70                                  |
| 09                                   | >4.25 to 4.75}    |  | 21                                   | >10.25 to 10.75}  | 33-40                                  | 38                                   | >18.75 to 19.25}  |  |
| 10                                   | >4.75 to 5.25}    | 17-19                                  | 22                                   | >10.75 to 11.25}  |  | 39                                   | >19.25 to 19.75}  |  |
| 11                                   | >5.25 to 5.75}    |  | 23                                   | >11.25 to 11.75}  |  | 40                                   | >19.75 to 20.25}  |  |
|                                      |                   |  | 24                                   | >11.75 to 12.25}  |  | 41                                   | >20.25 to 20.75}  |  |
|                                      |                   |  | 25                                   | >12.25 to 12.75}  | 41-48                                  | 42                                   | >20.75 to 21.25}  |  |
|                                      |                   |  | 26                                   | >12.75 to 13.25}  |  | 43                                   | >21.25 to 21.75}  |  |
|                                      |                   |  | 27                                   | >13.25 to 13.75}  |  | 44                                   | >21.75 to 22.25}  |  |
|                                      |                   |  | 28                                   | >13.75 to 14.25}  |  | 45                                   | >22.25 to 22.75}  |  |
|                                      |                   |  | 29                                   | >14.25 to 14.75}  |  | 46                                   | >22.75 to 23.25}  |  |
|                                      |                   |  |                                      |                   |  | 47                                   | >23.25 to 23.75}  | 71-86                                  |
|                                      |                   |  |                                      |                   |  | 48                                   | >23.75 to 24.25}  |  |
|                                      |                   |  |                                      |                   |  | 49                                   | >24.25 to 24.75}  |  |
|                                      |                   |  |                                      |                   |  | 50                                   | >24.75 to 25.25}  |  |
|                                      |                   |  |                                      |                   |  | 51                                   | >25.25 to 25.75}  |  |
|                                      |                   |  |                                      |                   |  | 52                                   | >25.75 to 26.25}  |  |
|                                      |                   |  |                                      |                   |  | 53-99                                | >26.25 to 49.75}  | ≥87                                    |

Indeterminate=INDET

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1857-1973

# JANUARY

AREA 0001 AZORES  
37.9N 26.6W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                           |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|---------------------------|------------|
| WIND DIR           | RAIH | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST BLWG SNOW | NO SIG WEA |
| N                  | 4.7  | 2.2       | 2.7  | .0        | .0   | .0              | .0   | 9.2             | 7.8            | .0                      | .3          | .0                  | .3         | .7                        | 81.6       |
| NE                 | 3.6  | 1.8       | 5.2  | .0        | .0   | .0              | .0   | 9.9             | 6.0            | .6                      | .9          | .0                  | .1         | .0                        | 82.5       |
| E                  | 6.6  | 3.3       | 2.7  | .0        | .0   | .0              | .0   | 12.5            | 5.2            | .0                      | .8          | .0                  | .0         | .0                        | 81.4       |
| SE                 | 5.5  | 2.8       | 1.9  | .0        | .0   | .0              | .0   | 10.1            | 5.2            | .1                      | 1.1         | .0                  | 1.2        | .0                        | 82.4       |
| S                  | 5.0  | 3.1       | 5.3  | .0        | .0   | .0              | .0   | 13.1            | 6.0            | .7                      | 2.9         | .0                  | 2.1        | .0                        | 75.4       |
| SW                 | 5.3  | 4.4       | 4.0  | .0        | .0   | .0              | .2   | 13.2            | 5.0            | 1.0                     | 1.1         | .0                  | 1.1        | .0                        | 78.8       |
| W                  | 2.9  | 4.2       | 3.2  | .0        | .0   | .0              | .0   | 9.9             | 6.2            | 1.0                     | .5          | .0                  | .4         | .0                        | 82.2       |
| NW                 | 2.4  | 2.3       | 1.4  | .0        | .0   | .0              | .0   | 6.1             | 7.0            | .5                      | .2          | .0                  | .5         | .1                        | 85.5       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | 100.0      |
| TOT PCT            | 4.3  | 3.3       | 3.4  | .0        | .0   | .0              | *    | 10.7            | 5.9            | .6                      | 1.1         | .0                  | .9         | .1                        | 80.8       |
| TOT OBS:           | 2953 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                           |            |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 0000          | 3.5                | 2.7          | 3.5  | .0           | .0   | .0                    | .0   | 9.6                     | 6.2               | 1.2          | .6             | .0                        | .7            | .1                              | 81.8             |
| 0600          | 5.2                | 3.3          | 4.2  | .0           | .0   | .0                    | .0   | 12.3                    | 4.2               | 1.5          | 1.2            | .0                        | 1.6           | .1                              | 79.4             |
| 1200          | 4.6                | 3.1          | 2.8  | .0           | .0   | .0                    | .1   | 10.1                    | 6.4               | .1           | .9             | .0                        | .6            | .0                              | 81.9             |
| 1800          | 3.8                | 3.9          | 2.8  | .0           | .0   | .0                    | .0   | 10.3                    | 6.5               | .0           | 1.8            | .0                        | .5            | .0                              | 80.9             |
| TOT PCT       | 4.3                | 3.3          | 3.3  | .0           | .0   | .0                    | *    | 10.6                    | 5.8               | .7           | 1.1            | .0                        | .9            | .1                              | 81.0             |
| TOT OBS:      | 2995               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |                  |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .4                 | 2.5  | 2.6   | 1.5   | .4    | .1  |      | 7.5       | 16.1     |          | 8.0        | 8.4   | 7.7   | 4.3   | 8.1   | 8.0   | 6.7   | 8.5   |
| NE       | .2                 | 2.3  | 2.4   | 1.0   | .3    | .0  |      | 6.2       | 15.1     |          | 5.9        | 7.2   | 6.6   | 5.4   | 5.6   | 5.5   | 6.4   | 7.3   |
| E        | .3                 | 2.5  | 2.9   | 1.2   | .3    | .0  |      | 7.2       | 14.9     |          | 5.3        | 7.3   | 6.3   | 8.7   | 6.9   | 9.6   | 7.3   | 10.2  |
| SE       | .2                 | 3.4  | 4.0   | 1.5   | .4    | *   |      | 9.6       | 15.3     |          | 9.0        | 9.5   | 7.7   | 13.7  | 9.8   | 13.6  | 8.5   | 9.6   |
| S        | .5                 | 4.5  | 6.5   | 4.1   | .8    | *   |      | 16.5      | 17.0     |          | 16.6       | 12.7  | 16.1  | 20.7  | 16.1  | 17.4  | 17.0  | 15.1  |
| SW       | .4                 | 5.3  | 8.8   | 5.3   | .9    | *   |      | 20.8      | 17.2     |          | 21.1       | 23.8  | 22.9  | 19.1  | 20.7  | 19.6  | 18.8  | 20.2  |
| W        | .4                 | 4.1  | 7.9   | 4.5   | 1.2   | .1  |      | 18.2      | 18.2     |          | 20.4       | 16.6  | 18.2  | 16.3  | 19.4  | 14.8  | 19.6  | 15.1  |
| NW       | .2                 | 3.9  | 4.9   | 2.9   | .7    | .1  |      | 12.7      | 17.0     |          | 12.3       | 12.6  | 13.1  | 11.0  | 12.8  | 11.0  | 14.5  | 11.6  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.2                |      |       |       |       |     |      | 1.2       | .0       |          | 1.5        | 2.0   | 1.3   | .9    | .5    | .6    | 1.2   | 2.4   |
| TOT OBS  | 169                | 1280 | 1801  | 991   | 228   | 19  | 4488 |           | 16.6     |          | 657        | 304   | 901   | 326   | 728   | 354   | 881   | 337   |
| TOT PCT  | 3.8                | 28.5 | 40.1  | 22.1  | 5.1   | .4  |      | 100.0     |          | 16.6     | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 09    | 15    | 18 |
| N        | 1.4                | 2.6  | 2.5   | .7    | .2  |           | 7.5      | 16.1     | 8.1        | 6.8   | 8.1   | 7.2   |    |
| NE       | 1.0                | 2.8  | 1.6   | .7    | .1  |           | 6.2      | 15.1     | 6.3        | 6.3   | 5.6   | 6.6   |    |
| E        | 1.4                | 3.1  | 2.0   | .7    | .1  |           | 7.2      | 14.9     | 5.9        | 6.9   | 7.8   | 8.1   |    |
| SE       | 1.5                | 4.4  | 2.7   | .8    | .1  |           | 9.6      | 15.3     | 9.2        | 9.3   | 11.0  | 8.8   |    |
| S        | 2.3                | 6.3  | 5.5   | 2.2   | .2  |           | 16.5     | 17.0     | 15.4       | 17.3  | 16.6  | 16.5  |    |
| SW       | 2.3                | 8.1  | 7.4   | 2.8   | .2  |           | 20.8     | 17.2     | 21.9       | 21.9  | 20.3  | 19.2  |    |
| W        | 1.8                | 7.0  | 6.4   | 2.5   | .5  |           | 18.2     | 18.2     | 19.2       | 17.7  | 17.9  | 18.3  |    |
| NW       | 1.5                | 5.6  | 3.9   | 1.5   | .3  |           | 12.7     | 17.0     | 12.4       | 12.5  | 12.2  | 13.7  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.2                |      |       |       |     |           | 1.2      | .0       | 1.7        | 1.2   | .6    | 1.6   |    |
| TOT OBS  | 645                | 1791 | 1437  | 541   | 74  | 4488      |          | 16.6     | 961        | 1227  | 1082  | 1218  |    |
| TOT PCT  | 14.4               | 39.9 | 32.0  | 12.1  | 1.6 |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1857-1973

JANUARY

AREA 0001 AZORES  
37.9N 26.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000 | 1.7  | 1.6 | 29.0 | 42.1               | 20.7  | 4.5   | .4  | 16.3 | 100.0    | 961       |
| 0600 | 1.2  | 2.8 | 30.6 | 40.3               | 19.4  | 5.1   | .6  | 16.1 | 100.0    | 1227      |
| 1200 | .6   | 3.2 | 27.9 | 40.3               | 23.3  | 4.3   | .5  | 16.8 | 100.0    | 1082      |
| 1800 | 1.6  | 2.4 | 26.5 | 38.3               | 24.8  | 6.2   | .2  | 17.0 | 100.0    | 1218      |
| TOT  | 56   | 113 | 1280 | 1801               | 991   | 228   | 19  | 16.6 |          | 4488      |
| PCT  | 1.2  | 2.5 | 28.5 | 40.1               | 22.1  | 5.1   | .4  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | .9   | 2.1  | 5.0  | 1.5          |              | 5.1                    |
| NE       | .6   | 1.4  | 2.6  | 1.7          |              | 5.6                    |
| E        | .6   | 1.8  | 1.7  | 2.3          |              | 5.6                    |
| SE       | 1.4  | 1.0  | 2.9  | 2.7          |              | 5.7                    |
| S        | 2.0  | 2.2  | 6.2  | 6.2          |              | 5.9                    |
| SW       | 2.9  | 2.7  | 6.5  | 7.0          |              | 5.7                    |
| W        | 4.2  | 4.9  | 6.4  | 5.4          |              | 5.0                    |
| NW       | 2.1  | 3.7  | 5.6  | 3.0          |              | 5.1                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .3   | .2   | .3   | .1           |              | 3.9                    |
| TOT OBS  | 346  | 461  | 808  | 686          | 2301         | 5.4                    |
| TOT PCT  | 15.0 | 20.0 | 35.1 | 29.8         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH<br>ANY HGT | <5/8<br>HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|---------------|-------------|--------------|
| *          | *          | .1         | .6         | 1.7          | .9           | .3           | .1           | *            | *     | *             | 3.8         |              |
| *          | *          | .3         | .6         | 1.0          | .7           | .4           | .1           | .0           | .1    | *             | 2.9         |              |
| .0         | .0         | .3         | .7         | 1.1          | .7           | .3           | .1           | *            | *     | *             | 3.1         |              |
| .1         | *          | .3         | 1.1        | 1.6          | .9           | .5           | .1           | *            | *     | *             | 3.4         |              |
| .1         | .3         | .8         | 2.8        | 3.2          | 1.5          | .7           | .1           | .0           | .1    | *             | 7.1         |              |
| .1         | .1         | .8         | 3.0        | 3.9          | 1.4          | .4           | .1           | .1           | .2    | *             | 9.1         |              |
| .1         | .1         | .5         | 2.6        | 3.4          | 1.6          | .5           | .3           | .1           | .2    | *             | 11.6        |              |
| .1         | .0         | .2         | 1.3        | 3.0          | 1.6          | .4           | .2           | .0           | *     | *             | 7.5         |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0            | .0          |              |
| .0         | .0         | .0         | .1         | .0           | .0           | .0           | .*           | .0           | .*    | .*            | .7          |              |
| 13         | 14         | 73         | 293        | 435          | 213          | 81           | 24           | 6            | 18    | 1131          | 2301        |              |
| .6         | .6         | 3.2        | 12.7       | 18.9         | 9.3          | 3.5          | 1.0          | .3           | .8    | 49.2          | 100.0       |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .9        | 1.1  | 1.1  | 1.1  | 1.1  | 1.1  | 1.1   | 1.1  |
| >5000             | 1.8       | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1   | 2.1  |
| >3500             | 4.5       | 5.6  | 5.7  | 5.7  | 5.7  | 5.7  | 5.7   | 5.7  |
| >2000             | 11.8      | 14.6 | 14.9 | 14.9 | 14.9 | 14.9 | 14.9  | 14.9 |
| >1000             | 24.9      | 33.0 | 33.8 | 33.9 | 33.9 | 33.9 | 33.9  | 33.9 |
| >600              | 32.0      | 44.4 | 46.4 | 46.5 | 46.6 | 46.6 | 46.6  | 46.6 |
| >300              | 32.9      | 46.9 | 49.4 | 49.7 | 49.7 | 49.7 | 49.8  | 49.8 |
| >150              | 33.0      | 47.3 | 50.0 | 50.3 | 50.3 | 50.3 | 50.4  | 50.4 |
| >0                | 33.3      | 47.7 | 50.5 | 50.8 | 50.8 | 50.8 | 51.0  | 51.0 |
| TOTAL             | 773       | 1107 | 1170 | 1178 | 1179 | 1179 | 1182  | 1182 |

TOTAL NUMBER OF OBS: 2319

PCT FREQ NH <5/8: 49.0

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4    | 5   | 6    | 7   | 8    | OBSCD | TOTAL<br>OBS |
|-----|-----|------|------|------|-----|------|-----|------|-------|--------------|
| 5.3 | 8.1 | 10.7 | 12.6 | 11.5 | 8.5 | 11.2 | 9.7 | 22.2 | .2    | 2491         |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1857-1973

JANUARY

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37.9N 26.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N   | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-----|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0  | .0  | .0  | .1  | *    | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0  | .1  | .0  | .0  | *    | *    | *    | .0   | .0  | .0   | .2    |              |
|              | TOT %  | .0  | .1  | .0  | .1  | .1   | *    | *    | .0   | .0  | .0   | .3    |              |
| 1/2<1        | PCP    | .0  | .0  | *   | .0  | .0   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0  | .0  | .0  | *   | .2   | .1   | .0   | *    | .0  | .0   | .3    |              |
|              | TOT %  | .0  | .0  | *   | *   | .2   | .1   | *    | *    | .0  | .0   | .4    |              |
| 1<2          | PCP    | .0  | .0  | .0  | .0  | .2   | .2   | .1   | *    | .0  | .0   | .4    |              |
|              | NO PCP | .0  | .0  | *   | .0  | *    | .1   | .1   | .0   | .0  | .0   | .1    |              |
|              | TOT %  | .0  | .0  | *   | .0  | .2   | .2   | .1   | *    | .0  | .0   | .5    |              |
| 2<5          | PCP    | .1  | *   | .1  | .2  | .7   | .4   | .3   | .1   | .0  | .0   | 1.9   |              |
|              | NO PCP | .1  | *   | .3  | .7  | .5   | .5   | .4   | .1   | .0  | .0   | 2.1   |              |
|              | TOT %  | .2  | .1  | .5  | .4  | 1.2  | .9   | .7   | .2   | .0  | .0   | 4.1   |              |
| 5<10         | PCP    | .3  | .3  | .5  | .4  | .9   | 1.6  | 1.1  | .4   | .0  | .0   | 5.6   |              |
|              | NO PCP | .9  | .7  | 1.7 | 2.0 | 4.3  | 4.0  | 3.3  | 1.8  | .0  | .0   | 18.7  |              |
|              | TOT %  | 1.2 | 1.0 | 2.3 | 2.4 | 5.3  | 5.5  | 4.4  | 2.2  | .0  | .0   | 24.3  |              |
| 10+          | PCP    | .3  | .2  | .2  | .2  | .5   | .4   | .5   | .3   | .0  | .0   | 2.6   |              |
|              | NO PCP | 5.6 | 4.3 | 4.0 | 5.5 | 10.1 | 13.0 | 14.2 | 10.3 | .0  | .8   | 67.8  |              |
|              | TOT %  | 5.9 | 4.5 | 4.2 | 5.7 | 10.5 | 13.4 | 14.7 | 10.5 | .0  | .8   | 70.4  |              |
| TOT OBS      |        |     |     |     |     |      |      |      |      |     |      |       | 2949         |
| TOT PCT      |        | 7.2 | 5.7 | 7.0 | 8.6 | 17.4 | 20.2 | 19.9 | 13.0 | .0  | .8   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N   | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-----|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0  | .0  | .0  | *   | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0  | .1  | .0  | *   | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0  | .0  | .0  | *   | .0   | .0   | *    | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0  | .0  | .0  | .0  | .1   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0  | .1  | .0  | .1  | .1   | *    | *    | .0   | .0  | .0   | .3    |              |
| 1/2<1        | 0-3        | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | .0  | *   | .0  | *    | *    | *    | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0  | .0  | *   | *   | .1   | *    | *    | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0  | .0  | .0  | *   | .1   | .1   | .0   | *    | .0  | .0   | .2    |              |
|              | TOT %      | .0  | .0  | .1  | *   | .2   | .1   | .1   | *    | .0  | .0   | .5    |              |
| 1<2          | 0-3        | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | *   | *   | *   | *    | *    | .0   | *    | .0  | .0   | .1    |              |
|              | 11-21      | *   | *   | .0  | .0  | *    | *    | .1   | .1   | .0  | .0   | .2    |              |
|              | 22+        | *   | *   | .1  | *   | .1   | .2   | .1   | .0   | .0  | .0   | .6    |              |
|              | TOT %      | *   | .1  | .1  | *   | .2   | .3   | .2   | .1   | .0  | .0   | 1.0   |              |
| 2<5          | 0-3        | .0  | .0  | *   | .0  | .0   | .0   | .0   | *    | .0  | *    | .1    |              |
|              | 4-10       | .1  | .1  | .1  | .1  | .1   | .1   | .1   | .1   | .0  | .0   | .7    |              |
|              | 11-21      | .1  | *   | .2  | .2  | .4   | .4   | .2   | .1   | .0  | .0   | 1.6   |              |
|              | 22+        | .1  | *   | .2  | .2  | .6   | .7   | .4   | .1   | .0  | .0   | 2.4   |              |
|              | TOT %      | .2  | .1  | .5  | .5  | 1.1  | 1.2  | .8   | .3   | .0  | *    | 4.8   |              |
| 5<10         | 0-3        | .0  | *   | *   | *   | *    | .1   | *    | .0   | .0  | .1   | .3    |              |
|              | 4-10       | .3  | .4  | .5  | .5  | .8   | .9   | .5   | .5   | .0  | .0   | 4.5   |              |
|              | 11-21      | .4  | .4  | 1.0 | .8  | 1.8  | 2.5  | 1.7  | .7   | .0  | .0   | 9.3   |              |
|              | 22+        | .5  | .4  | .8  | .8  | 2.0  | 2.3  | 2.1  | 1.0  | .0  | .0   | 9.8   |              |
|              | TOT %      | 1.2 | 1.2 | 2.3 | 2.2 | 4.7  | 5.8  | 4.3  | 2.2  | .0  | .1   | 24.0  |              |
| 10+          | 0-3        | .4  | .1  | .3  | .1  | .4   | .3   | .4   | .1   | .0  | 1.0  | 3.1   |              |
|              | 4-10       | 2.1 | 1.8 | 1.9 | 2.5 | 3.6  | 4.1  | 3.2  | 3.0  | .0  | .0   | 22.3  |              |
|              | 11-21      | 2.2 | 2.0 | 1.5 | 2.7 | 4.2  | 6.1  | 6.5  | 4.4  | .0  | .0   | 29.6  |              |
|              | 22+        | 1.1 | .7  | .6  | .6  | 2.2  | 2.9  | 3.7  | 2.6  | .0  | .0   | 14.6  |              |
|              | TOT %      | 5.7 | 4.6 | 4.3 | 6.0 | 10.5 | 13.4 | 13.8 | 10.2 | .0  | 1.0  | 69.5  |              |
| TOT OBS      |            |     |     |     |     |      |      |      |      |     |      |       | 3627         |
| TOT PCT      |            | 7.2 | 6.1 | 7.3 | 8.8 | 16.7 | 20.8 | 19.2 | 12.8 | .0  | 1.2  | 100.0 |              |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1857-1973

# JANUARY

AREA 0001 AZORES  
37.9N 26.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .4         | .4         | 2.7        | 10.8       | 18.4         | 7.7          | 3.5          | 1.3          | .0           | 1.1   | 46.2  | 53.8                | 548          |
| 06009         | .7         | .7         | 2.8        | 12.4       | 19.7         | 7.6          | 2.0          | .7           | .2           | .9    | 47.8  | 52.2                | 563          |
| 12015         | .7         | .3         | 2.6        | 13.2       | 17.0         | 10.2         | 3.8          | .9           | .6           | .9    | 50.2  | 49.8                | 687          |
| 18021         | .3         | 1.2        | 4.1        | 12.6       | 19.3         | 10.1         | 4.8          | 1.2          | .3           | .2    | 54.1  | 45.9                | 586          |
| TOT           | 13         | 15         | 73         | 294        | 442          | 214          | 84           | 24           | 7            | 18    | 1184  | 1200                | 2384         |
| PCT           | .5         | .6         | 3.1        | 12.3       | 18.5         | 9.0          | 3.5          | 1.0          | .3           | .8    | 49.7  | 50.3                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .1    | .6  | 3.7 | 20.5 | 74.9 | 816          |
| 06009         | .2   | .1    | 1.3 | 4.0 | 26.1 | 68.3 | 957          |
| 12015         | .5   | .4    | .8  | 4.4 | 22.4 | 71.3 | 945          |
| 18021         | .3   | 1.2   | 1.2 | 6.6 | 26.8 | 64.0 | 952          |
| TOT           | 12   | 17    | 36  | 173 | 884  | 2548 | 3670         |
| PCT           | .3   | .5    | 1.0 | 4.7 | 24.1 | 69.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>ANY 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .4            | 3.6        | 16.1        | 32.6            | 51.2               | 527          |
| 06009         | .7            | 4.4        | 18.3        | 31.5            | 50.2               | 542          |
| 12015         | .7            | 3.9        | 18.4        | 32.9            | 48.7               | 675          |
| 18021         | .3            | 5.9        | 20.5        | 34.8            | 44.7               | 575          |
| TOT           | 13            | 103        | 426         | 765             | 1128               | 2319         |
| PCT           | .6            | 4.4        | 18.4        | 33.0            | 48.6               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .1    | .0    | .0    | .0    | .0     | 2            | .1          |
| 70/74  | .0   | .0    | .0    | .0    | .2    | .0    | .0    | .0     | 5            | .2          |
| 65/69  | .0   | .0    | .0    | .4    | .7    | 1.7   | 3.2   | 2.5    | 214          | 8.6         |
| 60/64  | .0   | .0    | .1    | 1.6   | 5.8   | 11.8  | 21.5  | 16.3   | 1425         | 57.2        |
| 55/59  | .0   | .0    | .2    | 2.1   | 6.3   | 9.1   | 8.3   | 4.9    | 770          | 30.9        |
| 50/54  | .0   | .0    | .1    | .2    | .4    | 1.0   | 1.1   | .2     | 74           | 3.0         |
| 45/49  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 3            | .1          |
| TOTAL  | 0    | 0     | 9     | 109   | 331   | 596   | 852   | 596    | 2493         | 100.0       |
| PCT    | .0   | .0    | .4    | 4.4   | 13.3  | 23.9  | 34.2  | 23.9   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N   | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM |
|-------|-----|-----|-----|-----|------|------|------|------|-----|------|
| 75/79 | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   |
| 70/74 | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   |
| 65/69 | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   |
| 60/64 | .2  | .1  | .3  | .9  | 2.4  | 2.5  | 1.6  | .5   | .0  | .0   |
| 55/59 | 2.4 | 2.0 | 4.3 | 5.7 | 11.6 | 14.2 | 11.4 | 4.9  | .0  | .5   |
| 50/54 | 3.7 | 3.4 | 2.2 | 1.5 | 2.8  | 3.7  | 6.6  | 6.7  | .0  | .3   |
| 45/49 | .8  | .3  | .0  | .0  | .0   | .0   | .8   | .8   | .0  | .0   |
| TOTAL | .1  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   |
| PCT   | 7.3 | 5.8 | 6.8 | 8.3 | 16.8 | 20.6 | 20.6 | 13.0 | .0  | .8   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 68  | 66  | 64  | 60  | 55 | 52 | 49  | 59.9 | 947          |
| 06009         | 70  | 66  | 64  | 60  | 55 | 52 | 50  | 60.0 | 1221         |
| 12015         | 77  | 69  | 66  | 62  | 56 | 52 | 49  | 61.4 | 1067         |
| 18021         | 72  | 68  | 65  | 61  | 55 | 51 | 49  | 60.9 | 1202         |
| TOT           | 77  | 68  | 65  | 61  | 55 | 52 | 49  | 60.6 | 4437         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 3.9   | 12.4  | 24.2  | 32.7  | 26.8   | 82   | 590          |
| 06009         | .0   | 3.4   | 11.9  | 23.1  | 37.8  | 23.9   | 82   | 641          |
| 12015         | .0   | 6.1   | 13.6  | 24.3  | 33.3  | 22.8   | 80   | 676          |
| 18021         | .0   | 5.3   | 14.9  | 24.4  | 33.0  | 22.3   | 80   | 618          |
| TOT           | 0    | 119   | 333   | 606   | 864   | 603    | 81   | 2525         |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1857-1973

JANUARY

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37.9N 26.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | *        | .0       | .1       | *        | *        | 6     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .1       | .0       | *        | .0       | .0       | 3     | .0       | .1        |
| 7/8                | .0       | .0       | .0       | .1       | .4       | .3       | .0       | .0       | 21    | .0       | .8        |
| 6                  | .0       | .0       | .1       | .3       | .4       | .0       | .0       | .0       | 23    | .0       | .9        |
| 5                  | .0       | .0       | *        | .5       | .8       | .0       | .0       | .0       | 36    | .0       | 1.3       |
| 4                  | .0       | .0       | .4       | 1.3      | 1.0      | .1       | .0       | .0       | 77    | .0       | 2.9       |
| 3                  | .0       | *        | .2       | 3.1      | 1.6      | .0       | .0       | .0       | 131   | .1       | 4.8       |
| 2                  | .0       | .0       | 1.0      | 6.5      | 1.2      | .0       | .0       | .0       | 235   | *        | 8.7       |
| 1                  | .0       | *        | 1.6      | 9.8      | 1.2      | .0       | .0       | .0       | 338   | .2       | 12.4      |
| 0                  | .0       | .1       | 4.7      | 9.7      | .7       | .0       | .0       | .0       | 407   | .3       | 14.9      |
| -1                 | .0       | .3       | 6.6      | 6.3      | .2       | .0       | .0       | .0       | 361   | .2       | 13.2      |
| -2                 | .0       | .4       | 7.3      | 4.1      | .1       | .0       | .0       | .0       | 318   | .2       | 11.7      |
| -3                 | .0       | .7       | 5.8      | 1.3      | .0       | .0       | .0       | .0       | 211   | .1       | 7.8       |
| -4                 | .0       | 1.3      | 4.1      | 1.2      | .0       | .0       | .0       | .0       | 175   | .0       | 6.5       |
| -5                 | *        | 1.4      | 2.6      | .5       | .0       | .0       | .0       | .0       | 124   | .0       | 4.6       |
| -6                 | .1       | 1.6      | 1.5      | .2       | .0       | .0       | .0       | .0       | 91    | .0       | 3.4       |
| -7/-8              | .2       | 1.8      | 1.0      | *        | *        | .0       | .0       | .0       | 82    | .0       | 3.1       |
| -9/-10             | .4       | .6       | .1       | .0       | .0       | .0       | .0       | .0       | 29    | .0       | 1.1       |
| -11/-13            | .1       | .3       | *        | .0       | .0       | .0       | .0       | .0       | 13    | .0       | .5        |
| -14/-16            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| TOTAL              | 25       | 231      | 995      | 1207     | 208      | 15       | 1        | 1        | 2683  | 29       | 2654      |
| PCT                | .9       | 8.6      | 37.1     | 45.0     | 7.8      | .6       | *        | *        | 100.0 | 1.1      | 98.9      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | *   | .2   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .1  | .6   | .2    | .0    | .0    | .0  | .9  | .0  | .7   | .2    | .0    | .0    | .0  | .9  |
| 3-4     | .0  | .4   | .4    | .2    | .0    | .0  | 1.1 | .0  | .4   | .8    | *     | .0    | .0  | 1.2 |
| 5-6     | .0  | .1   | .7    | .7    | .0    | .0  | 1.5 | .0  | .0   | .5    | .2    | .0    | .0  | .6  |
| 7       | .0  | .0   | .4    | .2    | .0    | .0  | .7  | .0  | .0   | .4    | .2    | .1    | .0  | .7  |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .4  | .0  | .0   | .1    | .2    | .1    | .0  | .4  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .2    | .0    | .0  | .3  |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 13-16   | .0  | .0   | .0    | .2    | .2    | .0  | .4  | .0  | .0   | .0    | .1    | .4    | .0  | .6  |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 1.3  | 2.1   | 1.7   | .2    | .0  | 5.6 | *   | 1.3  | 2.1   | 1.0   | .6    | .0  | 5.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .2   | .0    | .0    | .0    | .0  | .5  | *   | .4   | .0    | .0    | .0    | .0  | .4  |
| 1-2     | .0  | .5   | .4    | .0    | .0    | .0  | .9  | .0  | 1.1  | .7    | .0    | .0    | .0  | 1.8 |
| 3-4     | .0  | .2   | .5    | .1    | .0    | .0  | .7  | .0  | .5   | .9    | *     | .0    | .0  | 1.4 |
| 5-6     | .0  | .0   | .4    | .3    | .0    | .0  | .7  | .0  | .3   | .9    | .5    | .0    | .0  | 1.8 |
| 7       | .0  | .0   | .4    | .3    | .1    | .0  | .8  | .0  | .0   | .8    | .2    | .1    | .0  | 1.1 |
| 8-9     | .0  | .0   | .1    | .6    | .2    | .0  | .9  | .0  | .0   | .0    | .2    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .4    | .1    | .0  | .4  | .0  | .0   | .0    | .1    | .1    | .0  | .2  |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | .9   | 1.8   | 1.9   | .4    | .0  | 5.3 | *   | 2.3  | 3.4   | 1.1   | .2    | .0  | 7.1 |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)AREA 0001 AZORES  
37.9N 26.6W

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .0  | .2   | .0    | .0    | .0    | .0  | .2   | .0  | .1   | .0    | .0    | .0    | .0  | .2   |           |
| 1-2     | .1  | 1.7  | 1.5   | .0    | .0    | .0  | 3.3  | .1  | 1.9  | 1.2   | .0    | .0    | .0  | 3.2  |           |
| 3-4     | .0  | 1.2  | 2.2   | .7    | .0    | .0  | 4.1  | .0  | .9   | 2.7   | .4    | .0    | .0  | 4.1  |           |
| 5-6     | .0  | .4   | 3.0   | 1.4   | .1    | .0  | 4.9  | .0  | .3   | 3.2   | 1.2   | .1    | .0  | 4.9  |           |
| 7       | .0  | .3   | 1.3   | 1.9   | .1    | .0  | 3.6  | .1  | .0   | 1.7   | 2.0   | .3    | .0  | 4.1  |           |
| 8-9     | .0  | .0   | .3    | 1.0   | .0    | .0  | 1.3  | .0  | .1   | .4    | 1.4   | .3    | .0  | 2.2  |           |
| 10-11   | .0  | .0   | .0    | .3    | .1    | .0  | .4   | .0  | .0   | .1    | .9    | .2    | .0  | 1.2  |           |
| 12      | .0  | .0   | .0    | .3    | .2    | .0  | .5   | .0  | .0   | .0    | .2    | .1    | .0  | .4   |           |
| 13-16   | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0   | .1    | .4    | .1    | .0  | .6   |           |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .2    | .0    | .0  | .3   |           |
| 20-22   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .1  | .1   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .1  | 3.7  | 8.4   | 6.0   | .6    | .0  | 18.7 | .2  | 3.3  | 9.5   | 6.9   | 1.2   | .1  | 21.2 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .1  | .5   | .1    | .0    | .0    | .0  | .7   | .0  | .4   | .0    | .0    | .0    | .0  | .4   |           |
| 1-2     | .0  | 1.2  | 1.1   | .0    | .0    | .0  | 2.4  | .0  | 1.5  | .8    | .0    | .0    | .0  | 2.3  |           |
| 3-4     | .0  | 2.1  | 3.6   | .6    | .0    | .0  | 6.3  | .0  | 1.2  | 1.4   | .3    | .0    | .0  | 2.9  |           |
| 5-6     | .0  | .4   | 2.4   | 1.8   | .0    | .0  | 4.6  | .0  | .2   | 1.9   | .7    | .0    | .0  | 2.7  |           |
| 7       | .0  | .0   | 1.7   | 1.2   | .2    | .0  | 3.1  | .0  | .0   | .8    | 1.1   | .0    | .0  | 2.0  |           |
| 8-9     | .0  | .1   | .6    | 1.4   | .2    | .0  | 2.3  | .0  | .1   | .1    | .3    | .0    | .0  | .5   |           |
| 10-11   | .0  | .0   | .4    | .9    | .3    | .0  | 1.6  | .0  | .0   | .2    | .7    | .0    | .0  | .9   |           |
| 12      | .0  | .0   | .0    | .6    | .4    | .0  | 1.0  | .0  | .0   | .0    | .1    | .1    | .0  | .2   |           |
| 13-16   | .0  | .0   | .1    | .5    | .3    | .0  | .8   | .0  | .0   | .0    | .3    | .4    | .0  | .7   |           |
| 17-19   | .0  | .0   | .0    | .2    | .0    | .0  | .7   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 23-25   | .0  | .0   | .0    | .0    | .2    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .1    | .2    | .0  | .3   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .1  | 4.3  | 10.1  | 7.3   | 1.7   | .0  | 23.5 | .0  | 3.3  | 5.2   | 3.7   | .6    | .0  | 12.8 | 99.3      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.9 | 2.1  | .1    | .0    | .0    | .0  | 4.1   |         |
| 1-2     | .3  | 9.5  | 6.0   | .0    | .0    | .0  | 15.8  |         |
| 3-4     | .0  | 6.8  | 12.5  | 2.4   | .0    | .0  | 21.7  |         |
| 5-6     | .0  | 1.6  | 13.0  | 6.8   | .2    | .0  | 21.6  |         |
| 7       | .1  | .3   | 7.6   | 7.2   | .9    | .0  | 16.0  |         |
| 8-9     | .0  | .3   | 2.0   | 5.3   | .7    | .0  | 8.2   |         |
| 10-11   | .0  | .0   | .8    | 3.5   | .7    | .0  | 5.0   |         |
| 12      | .0  | .0   | .0    | 1.7   | .8    | .0  | 2.5   |         |
| 13-16   | .0  | .0   | .2    | 1.9   | 1.4   | .0  | 3.5   |         |
| 17-19   | .0  | .0   | .0    | .4    | .2    | .0  | .6    |         |
| 20-22   | .0  | .0   | .0    | .2    | .3    | .0  | .4    |         |
| 23-25   | .0  | .0   | .0    | .0    | .2    | .1  | .3    |         |
| 26-32   | .0  | .0   | .0    | .1    | .2    | .0  | .3    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.2 | 20.6 | 42.2  | 29.4  | 5.5   | .1  | 100.0 | 1128    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .8  | 5.3 | 6.7  | 5.8  | 2.9  | 1.2  | .5    | .2  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 492   | 4        |
| 6-7          | .1  | .4  | 4.0  | 6.4  | 5.2  | 3.0  | 1.8   | 1.3 | .9    | .4    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 488   | 7        |
| 8-9          | .0  | .2  | .6   | 3.3  | 5.1  | 4.1  | 2.6   | 1.5 | 1.9   | .2    | .3    | .1    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 418   | 9        |
| 10-11        | .0  | .2  | .3   | .9   | .8   | 2.0  | 1.6   | 1.3 | 1.7   | .3    | .5    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 207   | 11       |
| 12-13        | .0  | .0  | .1   | .6   | 1.0  | .6   | .8    | .6  | 1.0   | .2    | .2    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 113   | 11       |
| >13          | .0  | .0  | .0   | .2   | .4   | .3   | .1    | .2  | .8    | .1    | .1    | .1    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 54    | 13       |
| INDET        | 1.5 | 1.1 | 1.4  | 1.6  | 1.9  | 2.0  | 1.4   | .7  | 1.3   | .6    | .5    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 290   | 8        |
| TOTAL        | 48  | 149 | 270  | 389  | 357  | 272  | 182   | 119 | 167   | 40    | 36    | 19    | 13    | 1     | 0     | 0     | 0     | 0     | 0   | 2062  | 7        |
| PCT          | 2.3 | 7.2 | 13.1 | 18.9 | 17.3 | 13.2 | 8.8   | 5.8 | 8.1   | 1.9   | 1.7   | .9    | .6    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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37.9N 26.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | 1.7                | 4.4       | .9   | .0        | .0   | .0              | .0   | 7.0                     | 8.4            | .0        | 2.1         | .0                  | .0         | .0              | 82.5       |
| NE       | 1.6                | 2.6       | .5   | .0        | .0   | .0              | .0   | 4.7                     | 5.5            | 1.0       | .1          | .0                  | 1.0        | .0              | 87.8       |
| E        | 3.6                | 4.4       | .7   | .0        | .0   | .0              | .0   | 8.7                     | 4.2            | .4        | .4          | .0                  | .0         | .0              | 86.4       |
| SE       | 6.5                | .4        | 1.8  | .0        | .0   | .0              | .0   | 8.4                     | 6.8            | .0        | 2.3         | .0                  | 2.9        | .0              | 79.6       |
| S        | 5.2                | 3.2       | 4.2  | .0        | .0   | .0              | .0   | 12.6                    | 4.8            | .5        | 2.3         | .0                  | 1.5        | .0              | 78.2       |
| SW       | 5.1                | 3.8       | 3.9  | .0        | .0   | .0              | .1   | 12.9                    | 6.3            | .9        | 1.8         | .0                  | .5         | .0              | 77.5       |
| W        | 3.3                | 2.3       | 1.4  | .0        | .0   | .0              | .2   | 7.2                     | 8.6            | 2.4       | .3          | .2                  | .5         | .1              | 81.1       |
| NW       | 3.7                | 3.2       | .9   | .0        | .0   | .0              | .4   | 7.8                     | 4.6            | 1.3       | .1          | .0                  | .4         | .0              | 86.0       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| TOT PCT  | 4.1                | 3.0       | 2.1  | .0        | .0   | .0              | .1   | 9.2                     | 6.2            | .9        | 1.2         | *                   | .8         | *               | 81.6       |
| TOT OBS: | 2756               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | 5.4                | 2.3       | 2.5  | .0        | .0   | .0              | .0   | 10.0                    | 6.5            | 2.0       | .8          | .0                  | .3         | .0              | 80.7       |
| 06009      | 4.3                | 3.0       | 3.1  | .0        | .0   | .0              | .0   | 10.4                    | 5.8            | 1.0       | 1.3         | .0                  | .1         | .0              | 81.3       |
| 12015      | 4.3                | 4.0       | 2.0  | .0        | .0   | .0              | .4   | 10.6                    | 7.1            | .3        | 1.4         | .0                  | 1.3        | .1              | 79.3       |
| 18021      | 2.7                | 2.6       | 1.2  | .0        | .0   | .0              | .0   | 6.4                     | 5.5            | .5        | 1.3         | .1                  | 1.4        | .0              | 84.7       |
| TOT PCT    | 4.1                | 3.0       | 2.1  | .0        | .0   | .0              | .1   | 9.2                     | 6.2            | .9        | 1.2         | *                   | .8         | *               | 81.6       |
| TOT OBS:   | 2802               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .2                 | 2.6  | 3.2   | 1.3   | .3    | .1  |      | 7.7       | 15.4     |          | 7.1        | 8.7   | 8.0   | 9.6   | 7.4   | 8.3   | 6.8   | 8.3   |
| NE       | .2                 | 2.6  | 3.7   | 1.0   | .2    | .0  |      | 7.8       | 14.5     |          | 7.5        | 5.2   | 8.3   | 8.8   | 7.8   | 7.9   | 8.3   | 7.3   |
| E        | .4                 | 3.3  | 4.3   | 1.1   | .4    | .0  |      | 9.4       | 14.1     |          | 9.2        | 10.0  | 8.4   | 10.1  | 9.5   | 11.3  | 9.7   | 8.7   |
| SE       | .4                 | 4.3  | 4.5   | 1.7   | .4    | *   |      | 11.3      | 14.6     |          | 10.3       | 13.9  | 12.3  | 8.6   | 10.7  | 9.0   | 11.9  | 12.3  |
| S        | .5                 | 4.2  | 6.4   | 2.9   | .7    | *   |      | 14.7      | 16.1     |          | 16.3       | 16.5  | 14.1  | 17.1  | 13.9  | 15.1  | 13.5  | 14.4  |
| SW       | .3                 | 4.4  | 8.3   | 4.7   | 1.4   | .1  |      | 19.3      | 18.5     |          | 19.8       | 19.2  | 18.6  | 17.9  | 19.3  | 21.0  | 19.1  | 20.2  |
| W        | .5                 | 3.5  | 6.3   | 4.5   | 1.5   | .3  |      | 16.6      | 19.7     |          | 17.8       | 14.0  | 16.7  | 13.3  | 19.4  | 14.1  | 16.6  | 16.7  |
| NW       | .3                 | 3.1  | 4.8   | 2.8   | .9    | .2  |      | 12.2      | 18.3     |          | 11.2       | 11.5  | 12.3  | 11.9  | 11.7  | 12.3  | 13.6  | 11.4  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .9                 |      |       |       |       |     |      | .9        | .0       |          | .8         | 1.0   | 1.3   | 2.6   | .3    | .9    | .3    | .6    |
| TOT OBS  | 160                | 1215 | 1803  | 865   | 246   | 35  | 4324 |           | 16.8     |          | 616        | 302   | 860   | 312   | 638   | 324   | 942   | 330   |
| TOT PCT  | 3.7                | 28.1 | 41.7  | 20.0  | 5.7   | .8  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 1.0                | 3.8  | 2.1   | .8    | .1  |           | 7.7      | 15.4     | 7.6        | 8.4   | 7.7   | 7.2   |
| NE       | 1.2                | 3.8  | 2.3   | .6    | *   |           | 7.8      | 14.5     | 6.7        | 8.4   | 7.8   | 8.0   |
| E        | 1.5                | 4.9  | 2.4   | .5    | .1  |           | 9.4      | 14.1     | 9.5        | 8.9   | 10.1  | 9.5   |
| SE       | 1.8                | 5.5  | 3.0   | .9    | .1  |           | 11.3     | 14.6     | 11.5       | 11.3  | 10.1  | 12.0  |
| S        | 1.8                | 6.6  | 4.8   | 1.3   | .2  |           | 14.7     | 16.1     | 16.3       | 14.9  | 14.3  | 13.7  |
| SW       | 1.2                | 7.7  | 6.9   | 2.9   | .5  |           | 19.3     | 18.5     | 19.6       | 18.4  | 19.9  | 19.4  |
| W        | 1.6                | 5.4  | 5.9   | 3.0   | .7  |           | 16.6     | 19.7     | 16.6       | 15.8  | 17.6  | 16.6  |
| NW       | 1.3                | 4.7  | 4.0   | 1.8   | .4  |           | 12.2     | 18.3     | 11.3       | 12.2  | 11.9  | 13.1  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | .9                 |      |       |       |     |           | .9       | .0       | .9         | 1.6   | .5    | .4    |
| TOT OBS  | 528                | 1833 | 1358  | 511   | 94  | 4324      |          | 16.8     | 918        | 1172  | 962   | 1272  |
| TOT PCT  | 12.2               | 42.4 | 31.4  | 11.8  | 2.2 |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | .9   | 3.1 | 27.0 | 42.2               | 19.4  | 6.5   | 1.0 | 17.1  | 100.0    | 918       |
| 06009 | 1.6  | 2.7 | 30.1 | 42.2               | 18.9  | 3.9   | .5  | 15.8  | 100.0    | 1172      |
| 12015 | .5   | 2.4 | 27.4 | 40.0               | 27.7  | 6.1   | .8  | 17.4  | 100.0    | 962       |
| 18021 | .4   | 3.1 | 27.5 | 42.2               | 19.4  | 6.4   | .9  | 17.0  | 100.0    | 1272      |
| TOT   | 37   | 123 | 1217 | 1804               | 865   | 240   | 35  | 16.8  |          | 4324      |
| PCT   | .9   | 2.8 | 28.1 | 41.7               | 20.0  | 5.7   | .8  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 1.2  | 1.4  | 3.1  | 1.4  |           | 5.1              |
| NE       | 1.3  | 1.6  | 3.0  | 1.9  |           | 5.3              |
| E        | 1.2  | 1.7  | 2.9  | 3.5  |           | 5.7              |
| SE       | 1.1  | 1.4  | 4.1  | 3.3  |           | 5.9              |
| S        | 1.6  | 1.7  | 4.3  | 5.7  |           | 6.0              |
| SW       | 2.3  | 2.6  | 6.8  | 8.2  |           | 6.0              |
| W        | 2.8  | 4.2  | 7.9  | 4.7  |           | 5.3              |
| NW       | 2.1  | 3.5  | 4.5  | 2.4  |           | 4.9              |
| VAR      | .0   | .0   | .0   | .0   |           | .0               |
| CALM     | .2   | .0   | .1   | .1   |           | 4.0              |
| TOT OBS  | 299  | 391  | 785  | 668  | 2143      | 5.4              |
| TOT PCT  | 14.0 | 18.2 | 36.6 | 31.2 | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM) >4/8  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|---------|-----|-----|-----|------|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .0  | .1  | .3  | .8   | 1.2  | .6   | .2   | .1   | .0   | .0    | 3.9             |           |
| NE      | .0  | .1  | .1  | .8   | 1.9  | .9   | .2   | .0   | .0   | .0    | 3.9             |           |
| E       | .0  | .1  | .3  | 1.4  | 1.6  | 1.4  | .4   | .2   | .0   | .0    | 3.9             |           |
| SE      | .0  | .0  | .2  | 1.1  | 2.4  | .7   | .4   | .2   | .0   | .0    | 4.9             |           |
| S       | .2  | .1  | .5  | 1.4  | 3.1  | 1.8  | .4   | .2   | .0   | .0    | 5.4             |           |
| SW      | .2  | .2  | .9  | 3.1  | 4.2  | 1.9  | .6   | .3   | .0   | .0    | 9.9             |           |
| W       | .0  | .1  | .6  | 2.9  | 3.4  | 1.7  | .8   | .1   | .0   | .0    | 7.5             |           |
| NW      | .0  | .0  | .3  | 1.2  | 1.9  | .9   | .4   | .2   | .0   | .0    | 5.0             |           |
| VAR     | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM    | .0  | .0  | .0  | .0   | .0   | .1   | .0   | .0   | .0   | .0    | .3              |           |
| TOT OBS | 9   | 12  | 69  | 272  | 423  | 215  | 73   | 28   | 2    | 10    | 1030            | 2143      |
| TOT PCT | .4  | .6  | 3.2 | 12.7 | 19.7 | 10.0 | 3.4  | 1.3  | .1   | .5    | 48.1            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .4        | .6   | .7   | .7   | .7   | .7   | .7    | .7   |
| >5000          | 1.5       | 1.9  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  |
| >3500          | 4.0       | 5.1  | 5.3  | 5.4  | 5.4  | 5.4  | 5.4   | 5.4  |
| >2000          | 11.6      | 14.7 | 15.6 | 15.7 | 15.7 | 15.7 | 15.7  | 15.7 |
| >1000          | 24.1      | 32.9 | 34.8 | 35.1 | 35.3 | 35.3 | 35.3  | 35.3 |
| >600           | 31.1      | 44.3 | 47.1 | 47.6 | 47.7 | 47.7 | 47.7  | 47.8 |
| >300           | 32.4      | 46.7 | 50.2 | 50.7 | 50.9 | 50.9 | 50.9  | 50.9 |
| >150           | 32.7      | 47.2 | 50.7 | 51.2 | 51.4 | 51.4 | 51.4  | 51.5 |
| >0             | 32.7      | 47.4 | 51.0 | 51.5 | 51.8 | 51.8 | 51.8  | 51.9 |
| TOTAL          | 709       | 1028 | 1106 | 1117 | 1122 | 1123 | 1123  | 1123 |

TOTAL NUMBER OF OBS: 2167

PCT FREQ NH <5/8: 48.1

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1   | 2    | 3    | 4    | 5   | 6    | 7    | 8    | OBS | TOTAL OBS |
|--|-----|-----|------|------|------|-----|------|------|------|-----|-----------|
|  | 5.4 | 6.9 | 11.6 | 12.4 | 11.0 | 9.0 | 11.1 | 10.2 | 22.2 | .3  | 2373      |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N   | NE  | E   | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-----|-----|-----|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .2    |              |
|              | NO PCP | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .2    |              |
| 1/2<1        | PCP    | .0  | .0  | .0  | .0   | .1   | .0   | .0   | .0   | .0  | .0   | .2    |              |
|              | NO PCP | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .0  | .0   | .3    |              |
|              | TOT %  | .0  | .0  | .0  | .1   | .2   | .1   | .0   | .0   | .0  | .0   | .4    |              |
| 1<2          | PCP    | .0  | .0  | .1  | .0   | .1   | .0   | .1   | .0   | .0  | .0   | .3    |              |
|              | NO PCP | .0  | .0  | .0  | .0   | .0   | .1   | .0   | .0   | .0  | .0   | .2    |              |
|              | TOT %  | .0  | .0  | .1  | .0   | .1   | .1   | .1   | .0   | .0  | .0   | .5    |              |
| 2<5          | PCP    | .1  | .0  | .1  | .2   | .5   | .7   | .2   | .2   | .0  | .0   | 1.9   |              |
|              | NO PCP | .2  | .1  | .1  | .4   | .5   | .5   | .6   | .3   | .0  | .0   | 2.7   |              |
|              | TOT %  | .2  | .1  | .2  | .6   | 1.0  | 1.2  | .8   | .4   | .0  | .0   | 4.6   |              |
| 5<10         | PCP    | .2  | .2  | .4  | .4   | .7   | 1.4  | .6   | .5   | .0  | .0   | 4.5   |              |
|              | NO PCP | 1.4 | 1.1 | 1.4 | 1.9  | 3.4  | 5.0  | 3.3  | 1.9  | .0  | .1   | 19.5  |              |
|              | TOT %  | 1.6 | 1.3 | 1.8 | 2.4  | 4.1  | 6.4  | 4.0  | 2.4  | .0  | .1   | 24.0  |              |
| 10+          | PCP    | .2  | .1  | .2  | .2   | .4   | .4   | .4   | .2   | .0  | .0   | 2.2   |              |
|              | NO PCP | 5.5 | 6.0 | 6.8 | 6.8  | 8.3  | 11.9 | 13.2 | 9.2  | .0  | .4   | 68.1  |              |
|              | TOT %  | 5.7 | 6.1 | 7.0 | 7.1  | 8.7  | 12.3 | 13.6 | 9.4  | .0  | .4   | 70.3  |              |
| TOT OBS      |        | 7.6 | 7.6 | 9.1 | 10.2 | 14.1 | 20.2 | 18.5 | 12.3 | .0  | .5   | 100.0 | 2749         |
| TOT PCT      |        | 7.6 | 7.6 | 9.1 | 10.2 | 14.1 | 20.2 | 18.5 | 12.3 | .0  | .5   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N   | NE  | E   | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-----|-----|-----|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0  | .0  | .0  | .1   | .2   | .0   | .0   | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0  | .0  | .0  | .0   | .0   | .1   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0  | .0  | .0  | .1   | .2   | .1   | .0   | .0   | .0  | .0   | .5    |              |
| 1<2          | 0-3        | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | .0  | .0  | .0   | .1   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0  | .0  | .0  | .0   | .0   | .1   | .1   | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0  | .0  | .0  | .1   | .1   | .1   | .1   | .0   | .0  | .0   | .5    |              |
|              | TOT %      | .0  | .0  | .0  | .1   | .2   | .2   | .2   | .1   | .0  | .0   | .9    |              |
| 2<5          | 0-3        | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | .0  | .1  | .1   | .3   | .2   | .1   | .0   | .0  | .0   | .9    |              |
|              | 11-21      | .1  | .1  | .2  | .4   | .5   | .2   | .1   | .0   | .0  | .0   | 1.7   |              |
|              | 22+        | .1  | .0  | .1  | .4   | .4   | .7   | .5   | .3   | .0  | .0   | 2.6   |              |
|              | TOT %      | .2  | .1  | .3  | .7   | 1.1  | 1.4  | .8   | .5   | .0  | .0   | 5.1   |              |
| 5<10         | 0-3        | .0  | .1  | .0  | .1   | .1   | .1   | .1   | .1   | .0  | .1   | .6    |              |
|              | 4-10       | .5  | .2  | .4  | .7   | .6   | .9   | .5   | .5   | .0  | .0   | 4.3   |              |
|              | 11-21      | .7  | .6  | .9  | 1.1  | 2.0  | 2.6  | 1.3  | .7   | .0  | .0   | 9.9   |              |
|              | 22+        | .4  | .4  | .6  | .9   | 1.7  | 2.4  | 1.9  | .9   | .0  | .0   | 9.1   |              |
|              | TOT %      | 1.5 | 1.3 | 1.9 | 2.8  | 4.3  | 6.0  | 3.8  | 2.3  | .0  | .1   | 23.9  |              |
| 10+          | 0-3        | .1  | .1  | .3  | .2   | .4   | .2   | .3   | .1   | .0  | .6   | 2.3   |              |
|              | 4-10       | 1.8 | 2.0 | 2.8 | 3.4  | 3.1  | 2.9  | 2.5  | 2.4  | .0  | .0   | 21.0  |              |
|              | 11-21      | 2.5 | 3.2 | 3.4 | 2.9  | 4.2  | 5.1  | 5.3  | 4.3  | .0  | .0   | 30.8  |              |
|              | 22+        | 1.2 | .9  | .9  | 1.0  | 1.5  | 3.2  | 4.1  | 2.6  | .0  | .0   | 15.3  |              |
|              | TOT %      | 5.7 | 6.2 | 7.3 | 7.5  | 9.1  | 11.4 | 12.2 | 9.4  | .0  | .6   | 69.4  |              |
| TOT OBS      |            | 7.4 | 7.6 | 9.6 | 11.2 | 15.0 | 19.1 | 17.1 | 12.3 | .0  | .7   | 100.0 | 3483         |
| TOT PCT      |            | 7.4 | 7.6 | 9.6 | 11.2 | 15.0 | 19.1 | 17.1 | 12.3 | .0  | .7   | 100.0 |              |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999  | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL        | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|-------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|--------------------|---------------|
| 00003          | .8         | .4         | 2.3        | 11.0        | 18.1         | 8.2          | 3.0          | 1.1          | .0           | 1.1      | 46.0         | 54.0               | 526           |
| 06009          | .2         | 1.2        | 2.7        | 11.9        | 17.0         | 9.4          | 2.9          | .8           | .2           | .6       | 46.9         | 53.1               | 488           |
| 12015          | .5         | .5         | 4.5        | 12.8        | 22.3         | 11.9         | 2.3          | 1.8          | .2           | .3       | 57.2         | 42.8               | 596           |
| 18021          | .2         | .2         | 2.6        | 12.6        | 17.9         | 10.0         | 4.5          | 1.2          | .0           | .3       | 49.5         | 50.5               | 642           |
| TOT<br>PCT     | 9<br>.4    | 12<br>.5   | 69<br>3.1  | 273<br>12.1 | 426<br>18.9  | 224<br>9.9   | 73<br>3.2    | 29<br>1.3    | 2<br>.1      | 13<br>.6 | 1130<br>50.2 | 1122<br>49.8       | 2252<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1    | 1<2      | 2<5        | 5<10        | 10+          | TOTAL<br>OBS  |
|----------------|---------|----------|----------|------------|-------------|--------------|---------------|
| 00003          | .3      | .4       | .6       | 4.2        | 21.5        | 73.0         | 786           |
| 06009          | .1      | .4       | .4       | 4.9        | 25.3        | 68.8         | 895           |
| 12015          | .2      | .7       | 1.3      | 5.5        | 23.7        | 68.5         | 835           |
| 18021          | .0      | .3       | 1.1      | 5.8        | 24.4        | 68.4         | 1013          |
| TOT<br>PCT     | 5<br>.1 | 16<br>.5 | 31<br>.9 | 182<br>5.2 | 840<br>23.8 | 2455<br>69.6 | 3529<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|--------------|------------|-------------|-----------------|-------------------|---------------|
| 00003          | 1.2          | 4.2        | 17.7        | 31.8            | 50.5              | 497           |
| 06009          | .2           | 4.4        | 19.8        | 30.7            | 49.5              | 459           |
| 12015          | .7           | 6.0        | 22.5        | 36.3            | 41.1              | 586           |
| 18021          | .2           | 3.0        | 20.0        | 32.2            | 47.8              | 625           |
| TOT<br>PCT     | 12<br>.6     | 95<br>4.4  | 436<br>20.1 | 713<br>32.9     | 1018<br>47.0      | 2167<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29    | 30-39  | 40-49    | 50-59     | 60-69       | 70-79       | 80-89       | 90-100      | TOTAL<br>OBS | PCT<br>FREQ |
|--------------|---------|--------|----------|-----------|-------------|-------------|-------------|-------------|--------------|-------------|
| 70/74        | .0      | .0     | .0       | .1        | *           | .0          | *           | .0          | 4            | .2          |
| 65/69        | .0      | *      | .0       | .1        | .6          | 1.2         | 1.2         | .6          | 88           | 3.8         |
| 60/64        | .0      | .0     | .1       | 1.2       | 5.2         | 11.1        | 18.0        | 13.4        | 1141         | 49.1        |
| 55/59        | .0      | .0     | .2       | 1.6       | 7.6         | 12.5        | 11.5        | 6.7         | 933          | 40.1        |
| 50/54        | .0      | .0     | .1       | .6        | 1.6         | 1.5         | 1.6         | 1.0         | 149          | 6.4         |
| 45/49        | .0      | .0     | .0       | .0        | .0          | .2          | .1          | *           | 9            | .4          |
| TOTAL<br>PCT | 0<br>.0 | 1<br>* | 10<br>.4 | 86<br>3.7 | 351<br>15.1 | 615<br>26.5 | 757<br>32.6 | 504<br>21.7 | 2324         | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N   | NE  | E   | SE   | S    | SW   | W    | NW   | VAR | CALM |
|-----|-----|-----|------|------|------|------|------|-----|------|
| .0  | *   | *   | *    | .0   | .0   | *    | .1   | .0  | .0   |
| .2  | .1  | .5  | .5   | .9   | .8   | .5   | .1   | .0  | .0   |
| 1.5 | 2.0 | 4.0 | 6.7  | 9.4  | 14.3 | 8.3  | 2.7  | .0  | .2   |
| 4.6 | 4.4 | 4.2 | 2.9  | 3.3  | 5.1  | 8.0  | 7.5  | .0  | .2   |
| 1.0 | .7  | .4  | .1   | .1   | .3   | 1.8  | 2.0  | .0  | *    |
| .1  | .0  | .0  | .0   | .0   | *    | .3   | *    | .0  | .0   |
| 7.5 | 7.3 | 9.1 | 10.2 | 13.8 | 20.4 | 18.9 | 12.3 | .0  | .4   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 68  | 64  | 63  | 59  | 54 | 51 | 48  | 58.8 | 925          |
| 06009          | 69  | 64  | 63  | 59  | 54 | 51 | 45  | 58.6 | 1171         |
| 12015          | 72  | 68  | 65  | 61  | 55 | 51 | 49  | 60.3 | 932          |
| 18021          | 74  | 67  | 64  | 60  | 55 | 51 | 48  | 59.9 | 1244         |
| TOT            | 74  | 66  | 64  | 60  | 54 | 51 | 45  | 59.4 | 4272         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 2.9   | 12.7  | 25.2  | 33.6  | 25.7   | 82   | 560          |
| 06009          | .0   | 3.2   | 11.9  | 22.9  | 35.9  | 26.1   | 82   | 571          |
| 12015          | .0   | 6.1   | 17.4  | 25.6  | 33.4  | 17.5   | 79   | 587          |
| 18021          | .0   | 4.2   | 18.4  | 30.3  | 28.5  | 18.6   | 79   | 646          |
| TOT            | 0    | 97    | 360   | 618   | 773   | 516    | 80   | 2364         |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1956-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>4R | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | TOT   | #<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | *        | 3     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | *        | .1       | *        | .1       | 6     | .0       | .2        |
| 7/8                | .0       | .0       | .0       | .2       | .1       | .3       | .1       | 16    | .0       | .6        |
| 6                  | .0       | .0       | .0       | .1       | .3       | .5       | .0       | 22    | .0       | .9        |
| 5                  | .0       | .0       | .0       | .1       | .6       | .6       | *        | 36    | .0       | 1.4       |
| 4                  | .0       | .0       | *        | .2       | 1.8      | .6       | *        | 67    | .0       | 2.7       |
| 3                  | .0       | .0       | .1       | .5       | 4.0      | .4       | .0       | 126   | *        | 5.0       |
| 2                  | .0       | .0       | *        | 1.9      | 6.8      | .4       | .0       | 231   | .2       | 9.0       |
| 1                  | .0       | .0       | .1       | 3.5      | 7.3      | .3       | .0       | 280   | .2       | 11.0      |
| 0                  | .0       | .0       | .2       | 9.1      | 6.5      | .1       | .0       | 398   | .3       | 15.6      |
| -1                 | .0       | .0       | .6       | 9.5      | 3.5      | *        | .0       | 343   | .3       | 13.4      |
| -2                 | .0       | *        | 1.1      | 7.8      | 1.7      | .0       | .0       | 265   | .2       | 10.4      |
| -3                 | .0       | *        | 2.3      | 5.5      | .3       | .0       | .0       | 204   | *        | 8.1       |
| -4                 | .0       | *        | 3.3      | 3.8      | .4       | .0       | .0       | 190   | *        | 7.5       |
| -5                 | .0       | .2       | 2.9      | 2.0      | .2       | *        | .0       | 134   | *        | 5.3       |
| -6                 | *        | .2       | 1.9      | .9       | .1       | .0       | .0       | 79    | .0       | 3.1       |
| -7/-8              | .0       | .7       | 1.8      | .4       | .1       | .0       | .0       | 72    | .0       | 2.9       |
| -9/-10             | *        | .3       | .7       | .2       | .0       | .0       | .0       | 30    | .0       | 1.2       |
| -11/-13            | .1       | .2       | *        | *        | .0       | .0       | .0       | 9     | .0       | .4        |
| TOTAL              | 4        | 43       | 378      | 1144     | 891      | 84       | 7        | 2511  | 33       | 2478      |
| PCT                | .2       | 1.7      | 15.1     | 45.6     | 33.9     | 3.3      | .3       | 100.0 | 1.3      | 98.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT | NE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .0  | .3   | .1    | .0    | .0    | .0  | .4  |
| 1-2     | .1  | 1.5  | .4    | .0    | .0    | .0  | 2.1 | .1  | 1.0  | .3    | .0    | .0    | .0  | 1.5 |
| 3-4     | .0  | .7   | 1.1   | .1    | .0    | .0  | 1.9 | .0  | .2   | 1.6   | .1    | .0    | .0  | 1.9 |
| 5-6     | .0  | .3   | .9    | .3    | .1    | .0  | 1.4 | .0  | .1   | 1.1   | .2    | .0    | .0  | 1.3 |
| 7       | .0  | .0   | .6    | .1    | .0    | .0  | .7  | .0  | .0   | .5    | .3    | .0    | .0  | .8  |
| 8-9     | .0  | .0   | .3    | .5    | .1    | .0  | .9  | .0  | .0   | .2    | .2    | .0    | .0  | .4  |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .2    | .1    | .0  | .3  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .1    | .0  | .2  |
| 13-16   | .0  | .0   | .0    | .2    | .1    | .0  | .3  | .0  | .0   | .0    | .0    | *     | .0  | *   |
| 17-19   | .0  | .0   | .0    | .0    | .2    | .0  | .2  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .1  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 2.6  | 3.4   | 1.4   | .4    | .1  | 8.0 | .1  | 1.7  | 4.0   | 1.1   | .3    | .0  | 7.1 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .1  | .2   | .0    | .0    | .0    | .0  | .3  |
| 1-2     | .0  | .9   | .7    | .0    | .0    | .0  | 1.5 | .0  | 1.6  | .4    | .0    | .0    | .0  | 2.0 |
| 3-4     | .0  | .7   | 2.0   | .1    | .0    | .0  | 2.8 | .0  | .9   | 1.8   | .0    | .0    | .0  | 2.7 |
| 5-6     | .0  | .0   | .5    | .6    | .1    | .0  | 1.1 | .0  | .1   | .9    | .1    | .0    | .0  | 1.1 |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .8    | .2    | *     | .0  | 1.0 |
| 8-9     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .6    | .0    | .0  | .6  |
| 10-11   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .1    | .2    | .0    | .0  | .3  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .1  | .1  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 1.7  | 3.4   | .8    | .3    | .0  | 6.1 | .1  | 2.8  | 4.1   | 1.3   | *     | .1  | 8.5 |

PERIOD: (OVER-ALL) 1963-1973

FEBRUARY  
TABLE 16 (CONT)AREA 0001 AZORES  
37.9N 26.6W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .2   | .0    | .0    | .0    | .0  | .2   | .1  | .5   | .1    | .0    | .0    | .0  | .7   |
| 1-2     | .0  | 1.1  | .5    | .0    | .0    | .0  | 1.6  | .2  | 1.3  | 1.4   | .0    | .0    | .0  | 2.8  |
| 3-4     | .0  | .9   | 1.5   | .3    | .0    | .0  | 2.7  | .0  | .7   | 2.7   | .3    | .0    | .0  | 3.7  |
| 5-6     | .0  | .2   | 1.6   | .7    | .1    | .0  | 2.5  | .0  | .5   | 3.5   | 1.7   | .2    | .0  | 5.9  |
| 7       | .0  | .1   | .5    | .7    | .4    | .0  | 1.7  | .0  | .0   | 1.3   | 1.7   | .3    | .0  | 3.3  |
| 8-9     | .0  | .0   | .5    | .5    | .2    | .0  | 1.2  | .0  | .0   | .8    | 1.4   | .3    | .2  | 2.7  |
| 10-11   | .0  | .0   | .0    | .4    | .1    | .0  | .4   | .0  | .0   | .3    | 2.0   | .3    | .0  | 2.6  |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0   | .0    | .2    | .3    | .0  | .5   |
| 13-16   | .0  | .0   | .1    | .3    | .2    | .0  | .5   | .0  | .0   | .2    | .5    | .5    | .0  | 1.2  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .2    | .0  | .2   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .0  | 2.4  | 4.8   | 2.9   | .9    | .0  | 11.0 | .3  | 3.0  | 10.3  | 7.8   | 2.0   | .2  | 23.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .0  | .2   | .0    | .0    | .0    | .0  | .2   | .0  | .1   | .0    | .0    | .0    | .0  | .1   |           |
| 1-2     | .2  | 1.5  | .6    | .0    | .0    | .0  | 2.3  | .0  | 1.5  | .5    | .0    | .0    | .0  | 2.1  |           |
| 3-4     | .0  | .5   | 1.5   | .1    | .0    | .0  | 2.2  | .0  | .7   | 1.7   | 1.1   | .0    | .0  | 3.5  |           |
| 5-6     | .0  | .3   | 2.4   | 1.9   | .2    | .0  | 4.8  | .0  | .2   | 1.8   | 1.0   | .0    | .0  | 3.0  |           |
| 7       | .0  | .0   | 1.6   | 2.2   | .6    | .0  | 4.4  | .0  | .0   | .7    | .4    | .0    | .0  | 1.0  |           |
| 8-9     | .0  | .0   | .6    | 1.7   | .8    | .0  | 3.1  | .0  | .0   | .3    | .9    | .5    | .0  | 1.8  |           |
| 10-11   | .0  | .0   | .1    | .9    | .7    | .1  | 1.3  | .0  | .0   | .1    | .5    | .3    | .0  | .8   |           |
| 12      | .0  | .0   | .0    | .2    | .4    | .0  | .6   | .0  | .0   | .0    | .2    | .2    | .0  | .4   |           |
| 13-16   | .0  | .0   | .1    | 1.0   | .3    | .0  | 1.3  | .0  | .0   | .0    | .0    | .3    | .0  | .3   |           |
| 17-19   | .0  | .0   | .0    | .0    | .2    | .0  | .2   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |           |
| 20-22   | .0  | .0   | .0    | .1    | .3    | .1  | .5   | .0  | .0   | .0    | .0    | .1    | .1  | .2   |           |
| 23-25   | .0  | .0   | .0    | .0    | .2    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .3    | .4  | .7   | .0  | .0   | .0    | .0    | .2    | .0  | .2   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .2  | 2.5  | 6.9   | 8.2   | 3.3   | .7  | 21.7 | *   | 2.5  | 5.0   | 4.2   | 1.7   | .1  | 13.5 | 99.6      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.5 | 1.6  | .2    | .0    | .0    | .0  | 3.3   |         |
| 1-2     | .9  | 10.7 | 4.8   | .0    | .0    | .0  | 16.4  |         |
| 3-4     | .1  | 5.3  | 13.7  | 2.0   | .0    | .0  | 21.1  |         |
| 5-6     | .1  | 1.8  | 12.3  | 6.3   | .6    | .0  | 21.1  |         |
| 7       | .0  | .1   | 6.0   | 5.5   | 1.3   | .0  | 12.8  |         |
| 8-9     | .0  | .1   | 2.7   | 5.7   | 1.8   | .3  | 10.5  |         |
| 10-11   | .0  | .0   | .7    | 4.1   | 1.0   | .1  | 5.9   |         |
| 12      | .0  | .0   | .0    | 1.1   | .9    | .0  | 2.0   |         |
| 13-16   | .0  | .0   | .5    | 2.2   | 1.4   | .0  | 4.1   |         |
| 17-19   | .0  | .0   | .1    | .1    | .6    | .0  | .8    |         |
| 20-22   | .0  | .0   | .0    | .1    | .4    | .3  | .8    |         |
| 23-25   | .0  | .0   | .0    | .1    | .2    | .0  | .3    |         |
| 26-32   | .0  | .0   | .0    | .0    | .5    | .4  | .9    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.6 | 19.6 | 41.0  | 27.1  | 8.7   | 1.1 | 100.0 | 1005    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <8           | .8  | 4.1 | 7.0  | 5.9  | 1.9  | 1.0  | .4    | .1  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 409   | 4        |
| 8-7          | .0  | .7  | 3.2  | 7.7  | 5.5  | 3.4  | 2.2   | 1.3 | 1.1   | .1    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 482   | 7        |
| 8-9          | .0  | .4  | 1.0  | 2.9  | 4.2  | 3.8  | 3.1   | 1.0 | 1.7   | .6    | .2    | .3    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 366   | 9        |
| 10-11        | .0  | .2  | .3   | .7   | 1.5  | 1.7  | 1.6   | 1.2 | 1.6   | .5    | .3    | .3    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 193   | 11       |
| 12-13        | .0  | .0  | .0   | .4   | .6   | .7   | .9    | .6  | 1.1   | .4    | .4    | .2    | .3    | .0    | .0    | .0    | .0    | .0    | .0  | 105   | 13       |
| >13          | .0  | .0  | .0   | .3   | .2   | .1   | .4    | .2  | .9    | .1    | .2    | .1    | .3    | .0    | .0    | .0    | .0    | .0    | .0  | 49    | 14       |
| INDET        | 1.1 | 1.6 | 1.3  | 2.8  | 1.8  | 1.3  | 2.7   | .9  | 1.3   | .3    | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 296   | 7        |
| TOTAL        | 35  | 131 | 244  | 393  | 296  | 228  | 214   | 101 | 151   | 40    | 31    | 19    | 17    | 0     | 0     | 0     | 0     | 0     | 0   | 1900  | 8        |
| PCT          | 1.8 | 6.9 | 12.8 | 20.7 | 15.6 | 12.0 | 11.3  | 5.3 | 7.9   | 2.1   | 1.6   | 1.0   | .9    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

MARCH

AREA 0001 AZORES  
38.0N 26.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                         |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-------------------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG WEA |
| N        | 2.8                | 1.2       | 3.2  | .0        | .0   | .0              | .0   | 6.8                     | 6.2            | .3        | 1.5         | .0                  | .8         | .0 84.7                 |
| NE       | 1.3                | 1.6       | 1.1  | .0        | .0   | .0              | .0   | 3.9                     | 3.6            | .0        | .9          | .0                  | .0         | .0 91.6                 |
| E        | 2.0                | 1.3       | 3.0  | .0        | .0   | .0              | .0   | 6.2                     | 4.5            | .0        | 1.3         | .0                  | .7         | .0 87.3                 |
| SE       | 4.2                | 1.4       | 2.2  | .0        | .0   | .0              | .0   | 7.8                     | 5.5            | .4        | 2.1         | .0                  | .9         | .0 83.3                 |
| S        | 6.4                | 2.0       | 3.8  | .0        | .0   | .0              | .0   | 11.7                    | 6.2            | .9        | 1.1         | .0                  | 1.2        | .2 78.7                 |
| SW       | 5.1                | 3.0       | 1.7  | .0        | .0   | .0              | .0   | 9.8                     | 7.1            | .9        | 2.3         | .0                  | 2.4        | * 77.6                  |
| W        | 3.3                | 3.2       | .9   | .0        | .0   | .0              | .0   | 7.1                     | 5.1            | 1.0       | .8          | .0                  | 2.0        | .0 84.2                 |
| NW       | 3.6                | 2.8       | 2.2  | .0        | .0   | .0              | .0   | 8.1                     | 5.4            | .5        | 1.3         | .0                  | .2         | .0 84.8                 |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0 .0                   |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 6.8         | .0                  | 4.5        | .0 88.6                 |
| TOT PCT  | 3.8                | 2.3       | 2.1  | .0        | .0   | .0              | .0   | 8.0                     | 5.6            | .6        | 1.5         | .0                  | 1.4        | * 83.0                  |
| TOT OBS: | 3024               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                         |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                         |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-------------------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG WEA |
| 00003      | 3.5                | 2.7       | 2.5  | .0        | .0   | .0              | .0   | 8.7                     | 5.9            | 1.2       | .7          | .0                  | 1.4        | .0 82.3                 |
| 06009      | 4.8                | 2.1       | 2.3  | .0        | .0   | .0              | .0   | 8.8                     | 7.0            | .9        | 2.0         | .0                  | .9         | .1 80.3                 |
| 12015      | 3.8                | 1.4       | 1.7  | .0        | .0   | .0              | .0   | 6.8                     | 5.4            | .0        | 1.4         | .0                  | 1.4        | .0 85.1                 |
| 18021      | 3.0                | 2.9       | 1.9  | .0        | .0   | .0              | .0   | 7.5                     | 3.9            | .4        | 2.0         | .0                  | 1.4        | .0 84.7                 |
| TOT PCT    | 3.8                | 2.3       | 2.1  | .0        | .0   | .0              | .0   | 7.9                     | 5.5            | .6        | 1.5         | .0                  | 1.3        | * 83.2                  |
| TOT OBS:   | 3063               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                         |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | .4                 | 2.4  | 2.8   | 1.3   | .5    | *   |      | 7.5       | 15.8     | 7.8      | 6.1        | 8.3   | 8.3   | 6.4   | 8.6   | 6.8   | 8.0   |    |
| NE       | .3                 | 3.1  | 3.6   | 1.2   | .3    | .1  |      | 8.7       | 14.5     | 8.4      | 9.0        | 8.6   | 8.7   | 9.3   | 8.0   | 8.5   | 8.8   |    |
| E        | .5                 | 3.3  | 3.8   | .7    | .1    | .0  |      | 8.4       | 12.6     | 8.1      | 8.7        | 8.4   | 8.0   | 9.2   | 7.5   | 8.4   | 7.8   |    |
| SE       | .2                 | 3.0  | 3.4   | 1.1   | .1    | *   |      | 7.8       | 14.2     | 8.8      | 6.5        | 7.1   | 5.8   | 7.7   | 6.9   | 9.8   | 6.7   |    |
| S        | .4                 | 3.8  | 6.0   | 2.3   | .3    | .0  |      | 12.8      | 15.3     | 14.1     | 11.7       | 13.2  | 9.4   | 12.6  | 13.1  | 12.4  | 15.1  |    |
| SW       | .5                 | 4.8  | 9.2   | 5.4   | 1.3   | *   |      | 21.2      | 18.1     | 22.4     | 25.3       | 20.6  | 21.8  | 21.5  | 18.7  | 20.9  | 19.3  |    |
| W        | .4                 | 4.7  | 8.1   | 5.0   | 1.2   | .1  |      | 19.5      | 18.1     | 19.1     | 15.4       | 19.6  | 22.9  | 22.8  | 19.5  | 18.1  | 17.2  |    |
| NW       | .3                 | 3.4  | 4.8   | 3.0   | .8    | .1  |      | 12.4      | 17.6     | 10.0     | 16.0       | 11.8  | 13.3  | 9.5   | 15.9  | 13.5  | 15.2  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 1.6                |      |       |       |       |     |      | 1.6       | .0       | 1.3      | 1.3        | 2.4   | 1.8   | 1.1   | 1.9   | 1.5   | 2.0   |    |
| TOT OBS  | 212                | 1320 | 1922  | 931   | 216   | 15  | 4616 |           | 16.1     | 702      | 298        | 932   | 329   | 739   | 320   | 989   | 307   |    |
| TOT PCT  | 4.6                | 28.6 | 41.6  | 20.2  | 4.7   | .3  |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 1.3                | 3.3  | 1.9   | .8    | .2  |           | 7.5      | 15.8     | 7.3        | 8.3   | 7.0   | 7.1   |    |
| NE       | 1.5                | 4.4  | 2.1   | .6    | .2  |           | 8.7      | 14.5     | 8.6        | 8.6   | 8.9   | 8.6   |    |
| E        | 1.6                | 4.8  | 1.4   | .4    | *   |           | 8.4      | 12.6     | 8.3        | 8.3   | 8.7   | 8.3   |    |
| SE       | .9                 | 4.4  | 2.0   | .6    | *   |           | 7.8      | 14.2     | 8.1        | 6.7   | 7.4   | 9.1   |    |
| S        | 1.9                | 5.4  | 4.7   | .9    | .0  |           | 12.8     | 15.3     | 13.4       | 12.2  | 12.7  | 13.1  |    |
| SW       | 2.0                | 7.7  | 7.9   | 3.2   | .3  |           | 21.2     | 18.1     | 23.2       | 20.9  | 20.7  | 20.5  |    |
| W        | 2.0                | 7.2  | 7.2   | 2.9   | .3  |           | 19.5     | 18.1     | 18.0       | 20.5  | 21.8  | 17.9  |    |
| NW       | 1.4                | 4.7  | 4.0   | 2.0   | .3  |           | 12.4     | 17.6     | 11.8       | 12.2  | 11.5  | 13.9  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.6                |      |       |       |     |           | 1.6      | .0       | 1.3        | 2.2   | 1.3   | 1.6   |    |
| TOT OBS  | 661                | 1927 | 1438  | 528   | 62  | 4616      |          | 16.1     | 1000       | 1261  | 1059  | 1296  |    |
| TOT PCT  | 14.3               | 41.7 | 31.2  | 11.4  | 1.3 |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1896-1973

MARCH

AREA 0001 AZORES  
38.0N 26.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | WIND SPEED (KNOTS) |      |       |       |       |    | 48+   | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|--------------------|------|-------|-------|-------|----|-------|-------|----------|-----------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 |    |       |       |          |           |
| 00003 | 1.3  | 2.4                | 26.0 | 45.5  | 20.6  | 4.1   | .1 | 16.4  | 100.0 | 1000     |           |
| 06009 | 2.2  | 2.9                | 29.7 | 40.0  | 19.8  | 4.8   | .5 | 15.9  | 100.0 | 1261     |           |
| 12015 | 1.3  | 2.8                | 29.1 | 42.7  | 19.1  | 4.6   | .4 | 16.0  | 100.0 | 1059     |           |
| 18021 | 1.6  | 3.5                | 29.2 | 39.4  | 21.1  | 5.0   | .3 | 16.3  | 100.0 | 1296     |           |
| TOT   | 76   | 136                | 1320 | 1922  | 931   | 216   | 15 | 16.1  |       | 4616     |           |
| PCT   | 1.6  | 2.9                | 28.6 | 41.6  | 20.2  | 4.7   | .3 | 100.0 |       |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
|          |      |      |      |               |              |                        |
| N        | 1.4  | 1.7  | 2.0  | 1.4           |              | 4.7                    |
| NE       | 1.7  | 1.4  | 3.6  | 2.0           |              | 5.1                    |
| E        | 1.7  | 1.2  | 3.4  | 3.1           |              | 5.5                    |
| SE       | 1.0  | 1.1  | 2.7  | 3.9           |              | 6.1                    |
| S        | 1.4  | 1.4  | 4.6  | 5.8           |              | 6.2                    |
| SW       | 2.9  | 3.0  | 7.7  | 8.0           |              | 5.8                    |
| W        | 4.0  | 4.9  | 7.2  | 4.8           |              | 5.0                    |
| NW       | 1.9  | 3.2  | 3.1  | 1.5           |              | 4.5                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | .5   | .3   | .3   | .3            |              | 4.4                    |
| TOT OBS  | 399  | 445  | 839  | 753           | 2436         | 5.4                    |
| TOT PCT  | 16.4 | 18.3 | 34.4 | 30.9          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT/NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|------|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .0  | *   | .1  | .6   | 1.2  | .5   | .2   | .1   | .0   | .0    | 3.9     |       |
| .1  | *   | .1  | .9   | 1.7  | 1.0  | .3   | .2   | *    | .0    | 4.3     |       |
| .1  | *   | .1  | .9   | 2.2  | 1.2  | .7   | .1   | *    | *     | 4.0     |       |
| *   | .0  | .2  | 1.3  | 1.8  | 1.3  | .3   | .1   | .1   | *     | 3.5     |       |
| .1  | .2  | .6  | 1.9  | 2.7  | 1.5  | .6   | .2   | *    | .2    | 5.1     |       |
| .1  | .2  | .5  | 3.4  | 4.0  | 1.8  | .8   | .3   | .1   | .4    | 10.0    |       |
| *   | .2  | .3  | 1.9  | 4.1  | 1.7  | .7   | .2   | .0   | .2    | 11.5    |       |
| .0  | .1  | .1  | .6   | 1.8  | .6   | .2   | .1   | .0   | *     | 6.2     |       |
| .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| *   | .0  | .0  | .2   | .2   | *    | .0   | .0   | .0   | *     | .9      |       |
| 13  | 15  | 50  | 285  | 484  | 238  | 89   | 29   | 7    | 23    | 1203    | 2436  |
| .5  | .6  | 2.1 | 11.7 | 19.9 | 9.8  | 3.7  | 1.2  | .3   | .9    | 49.4    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.2        | 1.3        | 1.3        | 1.3          | 1.3          | 1.3           | 1.3        |
| = OR >5000        | 1.5         | 2.2        | 2.4        | 2.4        | 2.4          | 2.4          | 2.4           | 2.4        |
| = OR >3500        | 4.2         | 5.9        | 6.2        | 6.2        | 6.2          | 6.2          | 6.2           | 6.2        |
| = OR >2000        | 10.6        | 15.3       | 15.8       | 15.8       | 15.8         | 15.8         | 15.8          | 15.8       |
| = OR >1000        | 23.6        | 33.9       | 35.5       | 35.5       | 35.5         | 35.5         | 35.5          | 35.5       |
| = OR >600         | 30.9        | 44.8       | 47.0       | 47.1       | 47.1         | 47.2         | 47.2          | 47.2       |
| = OR >300         | 31.6        | 46.5       | 48.9       | 49.1       | 49.1         | 49.2         | 49.2          | 49.2       |
| = OR >150         | 31.8        | 47.0       | 49.5       | 49.8       | 49.8         | 49.8         | 49.8          | 49.8       |
| = OR >0           | 31.9        | 47.2       | 49.8       | 50.2       | 50.2         | 50.2         | 50.2          | 50.3       |
| TOTAL             | 782         | 1159       | 1222       | 1231       | 1232         | 1233         | 1233          | 1235       |

TOTAL NUMBER OF OBS: 2454

PCT FREQ NH <5/8: 49.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4   | 5   | 6    | 7    | 8    | OBS CD | TOTAL<br>OBS |
|-----|-----|------|------|-----|-----|------|------|------|--------|--------------|
| 7.4 | 8.6 | 10.9 | 12.6 | 9.5 | 7.2 | 10.0 | 10.4 | 23.1 | .2     | 2632         |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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38.0N 26.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N   | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-----|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0  | .0  | .0  | .0  | *    | *    | *    | *    | .0  | .0   | .0    | .1           |
|              | TOT %  | .0  | .0  | .0  | .0  | *    | *    | .0   | *    | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0  | .0  | *   | .0  | .1   | .1   | .0   | .0   | .0  | .0   | .2    |              |
|              | NO PCP | *   | .1  | *   | .1  | *    | .2   | .1   | *    | .0  | *    | .6    |              |
|              | TOT %  | *   | .1  | .1  | .1  | .1   | .3   | .1   | *    | .0  | *    | .8    |              |
| 1<2          | PCP    | *   | .0  | .0  | .1  | .1   | .1   | .0   | *    | .0  | .0   | .3    |              |
|              | NO PCP | *   | .0  | .0  | .0  | .0   | *    | *    | *    | .0  | .0   | .1    |              |
|              | TOT %  | *   | .0  | .0  | .1  | .1   | .1   | *    | *    | .0  | .0   | .4    |              |
| 2<5          | PCP    | *   | .0  | *   | .1  | .2   | .5   | .2   | .0   | .0  | .0   | 1.3   |              |
|              | NO PCP | .1  | .1  | *   | .3  | .3   | .8   | .6   | *    | .0  | .1   | 2.4   |              |
|              | TOT %  | .1  | .1  | .1  | .4  | .6   | 1.4  | .8   | .2   | .0  | .1   | 3.7   |              |
| 5<10         | PCP    | .2  | .2  | .3  | .3  | 1.0  | 1.1  | .7   | .3   | .0  | .0   | 4.2   |              |
|              | NO PCP | 1.0 | 1.4 | 1.6 | 1.4 | 3.1  | 6.2  | 3.7  | 1.6  | .0  | .2   | 20.2  |              |
|              | TOT %  | 1.1 | 1.6 | 1.9 | 1.7 | 4.1  | 7.3  | 4.4  | 1.9  | .0  | .2   | 24.4  |              |
| 10+          | PCP    | .2  | .1  | .2  | .1  | .2   | .4   | .6   | .3   | .0  | .0   | 2.1   |              |
|              | NO PCP | 4.9 | 6.8 | 7.0 | 6.0 | 8.3  | 12.4 | 14.4 | 7.7  | .0  | 1.1  | 68.5  |              |
|              | TOT %  | 5.1 | 6.9 | 7.2 | 6.1 | 8.5  | 12.7 | 15.0 | 8.0  | .0  | 1.1  | 70.6  |              |
| TOT OBS      |        |     |     |     |     |      |      |      |      |     |      |       | 3017         |
| TOT PCT      |        | 6.4 | 8.6 | 9.2 | 8.5 | 13.4 | 21.9 | 20.4 | 10.1 | .0  | 1.5  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N   | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-----|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0  | .0  | .0  | .0  | *    | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 11-21      | .0  | .0  | .0  | *   | *    | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0  | .0  | .0  | .0  | *    | .0   | .0   | *    | .0  | .0   | .1    |              |
|              | TOT %      | .0  | .0  | .0  | *   | .1   | *    | .0   | *    | .0  | .0   | .2    |              |
| 1/2<1        | 0-3        | *   | .0  | .0  | .0  | .0   | .0   | *    | *    | .0  | *    | .1    |              |
|              | 4-10       | .0  | .0  | .0  | *   | .0   | .1   | *    | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0  | .1  | .1  | *   | *    | .1   | .1   | .0   | .0  | .0   | .4    |              |
|              | 22+        | .0  | .0  | .0  | *   | .1   | .1   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | *   | .1  | .1  | .1  | .1   | .3   | .1   | *    | .0  | *    | .8    |              |
| 1<2          | 0-3        | *   | .0  | .0  | .0  | .0   | .0   | .0   | *    | .0  | .0   | *     |              |
|              | 4-10       | .0  | .0  | *   | *   | *    | .1   | *    | .0   | .0  | .0   | .1    |              |
|              | 11-21      | *   | .0  | .0  | .0  | .0   | .1   | .0   | *    | .0  | .0   | .1    |              |
|              | 22+        | .0  | .0  | .0  | .1  | *    | .1   | .0   | .0   | .0  | .0   | .2    |              |
|              | TOT %      | *   | .0  | *   | .1  | .1   | .2   | *    | *    | .0  | .0   | .4    |              |
| 2<5          | 0-3        | .0  | .0  | .0  | .0  | .0   | .0   | *    | .0   | .0  | .1   | .1    |              |
|              | 4-10       | *   | .1  | *   | *   | .1   | .1   | .2   | *    | .0  | .0   | .5    |              |
|              | 11-21      | *   | .1  | *   | .2  | .3   | .4   | .4   | .2   | .0  | .0   | 1.6   |              |
|              | 22+        | .1  | *   | *   | .2  | .3   | .8   | .4   | .1   | .0  | .0   | 2.0   |              |
|              | TOT %      | .1  | .1  | .1  | .4  | .7   | 1.3  | 1.0  | .4   | .0  | .1   | 4.2   |              |
| 5<10         | 0-3        | *   | .2  | .2  | .0  | .1   | .1   | .0   | .1   | .0  | .2   | .8    |              |
|              | 4-10       | .3  | .5  | .7  | .3  | .7   | .8   | .8   | .5   | .0  | .0   | 4.6   |              |
|              | 11-21      | .5  | .5  | .7  | .8  | 1.7  | 2.7  | 1.4  | 1.0  | .0  | .0   | 9.3   |              |
|              | 22+        | .4  | .3  | .1  | .5  | 1.3  | 3.3  | 2.1  | 1.1  | .0  | .0   | 9.3   |              |
|              | TOT %      | 1.2 | 1.5 | 1.7 | 1.6 | 3.8  | 6.9  | 4.4  | 2.7  | .0  | .2   | 24.0  |              |
| 10+          | 0-3        | .3  | .1  | .3  | .2  | .2   | .3   | .3   | .2   | .0  | 1.2  | 3.1   |              |
|              | 4-10       | 2.1 | 2.6 | 2.6 | 2.8 | 2.8  | 3.5  | 3.4  | 2.6  | .0  | .0   | 22.3  |              |
|              | 11-21      | 2.3 | 2.8 | 3.3 | 2.4 | 4.0  | 6.3  | 6.7  | 4.0  | .0  | .0   | 31.9  |              |
|              | 22+        | .9  | 1.0 | .6  | .6  | 1.1  | 2.6  | 4.2  | 2.1  | .0  | .0   | 13.1  |              |
|              | TOT %      | 5.6 | 6.6 | 6.9 | 6.0 | 8.1  | 12.7 | 14.6 | 8.9  | .0  | 1.2  | 70.5  |              |
| TOT OBS      |            |     |     |     |     |      |      |      |      |     |      |       | 3718         |
| TOT PCT      |            | 6.9 | 8.3 | 8.7 | 8.1 | 12.9 | 21.5 | 20.1 | 12.1 | .0  | 1.5  | 100.0 |              |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .8         | 1.0        | 1.0        | 9.4        | 21.5         | 7.9          | 3.5          | 1.2          | .2           | .8    | 47.4  | 52.6                | 604          |
| 06009         | .9         | .5         | 1.3        | 14.6       | 17.7         | 10.9         | 3.0          | .9           | .4           | .2    | 50.4  | 49.6                | 560          |
| 12015         | .4         | .6         | 2.6        | 12.4       | 18.2         | 9.4          | 4.2          | .9           | .3           | 1.2   | 50.1  | 49.9                | 692          |
| 18021         | .0         | .3         | 2.8        | 9.0        | 19.4         | 9.5          | 3.6          | 1.8          | .3           | 1.5   | 48.1  | 51.9                | 676          |
| TOT           | 13         | 15         | 50         | 286        | 486          | 238          | 91           | 30           | 7            | 24    | 1240  | 1292                | 2532         |
| PCT           | .5         | .6         | 2.0        | 11.3       | 19.2         | 9.4          | 3.6          | 1.2          | .3           | .9    | 49.0  | 51.0                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2-1 | 1-2 | 2-5 | 5-10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .5    | .2  | 3.6 | 23.1 | 72.5 | 862          |
| 06009         | .1   | .6    | .3  | 4.7 | 25.5 | 68.7 | 969          |
| 12015         | .2   | .8    | .8  | 3.4 | 21.1 | 73.8 | 911          |
| 18021         | .2   | 1.2   | .4  | 4.8 | 25.4 | 68.0 | 1015         |
| TOT           | 6    | 29    | 16  | 157 | 896  | 2653 | 3757         |
| PCT           | .2   | .8    | .4  | 4.2 | 23.8 | 70.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .9            | 2.9        | 15.3        | 34.7            | 50.1               | 577          |
| 06009         | .9            | 2.8        | 20.9        | 32.1            | 46.9               | 535          |
| 12015         | .4            | 3.5        | 18.6        | 33.3            | 48.1               | 678          |
| 18021         | .0            | 3.3        | 14.0        | 35.1            | 50.9               | 664          |
| TOT           | 13            | 78         | 419         | 831             | 1204               | 2454         |
| PCT           | .5            | 3.2        | 17.1        | 33.9            | 49.1               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 70/74  | .0   | .0    | .1    | *     | .0    | .1    | .0    | *      | 6            | 4.2         |
| 65/69  | .0   | .0    | .1    | .2    | .6    | 1.4   | 1.8   | .7     | 123          | 4.8         |
| 60/64  | .0   | *     | .2    | 1.2   | 5.1   | 11.1  | 19.7  | 11.2   | 1233         | 48.5        |
| 55/59  | .0   | .0    | *     | 1.9   | 7.6   | 13.6  | 12.4  | 6.7    | 1077         | 42.3        |
| 50/54  | .0   | .0    | .0    | .2    | .6    | .8    | 1.4   | 1.1    | 104          | 4.1         |
| 45/49  | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | 1            | *           |
| TOTAL  | 0    | 1     | 10    | 91    | 353   | 696   | 900   | 503    | 2544         | 100.0       |
| PCT    | .0   | *     | .4    | 3.6   | 13.9  | 27.0  | 35.4  | 19.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N   | NE  | E   | SE  | S    | SW   | W    | NW  | VAR | CALM |
|-------|-----|-----|-----|-----|------|------|------|-----|-----|------|
| 70/74 | .0  | *   | *   | .0  | .1   | *    | .1   | .0  | .0  | .0   |
| 65/69 | .2  | .3  | .2  | .3  | .8   | 1.8  | 1.2  | .1  | .0  | *    |
| 60/64 | 1.2 | 2.6 | 3.6 | 5.1 | 9.5  | 14.6 | 8.4  | 2.6 | .0  | .9   |
| 55/59 | 3.9 | 5.7 | 4.6 | 3.2 | 3.5  | 5.5  | 9.1  | 6.2 | .0  | .7   |
| 50/54 | .7  | .2  | .4  | .1  | *    | .4   | 1.1  | 1.1 | .0  | .0   |
| 45/49 | .0  | .0  | .0  | .0  | .0   | .0   | *    | .0  | .0  | .0   |
| TOTAL | 6.1 | 8.9 | 8.8 | 8.6 | 13.9 | 22.4 | 19.9 | 9.9 | .0  | 1.6  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 69  | 64  | 63  | 59  | 54 | 51 | 49  | 58.8 | 993          |
| 06009         | 70  | 64  | 63  | 59  | 54 | 51 | 47  | 58.7 | 1252         |
| 12015         | 73  | 68  | 66  | 61  | 55 | 52 | 50  | 60.7 | 1040         |
| 18021         | 73  | 68  | 66  | 60  | 55 | 52 | 49  | 60.4 | 1267         |
| TOT           | 73  | 68  | 64  | 60  | 55 | 51 | 47  | 59.7 | 4552         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.6   | 13.6  | 26.2  | 37.0  | 20.7   | 81   | 627          |
| 06009         | .0   | 1.9   | 10.1  | 28.1  | 36.1  | 23.8   | 82   | 634          |
| 12115         | .0   | 6.1   | 16.5  | 27.2  | 32.6  | 17.6   | 79   | 659          |
| 18021         | .0   | 5.8   | 15.9  | 26.8  | 34.9  | 16.6   | 79   | 656          |
| TOT           | 0    | 106   | 362   | 697   | 905   | 506    | 80   | 2576         |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1856-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/1A              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | .1       | .1       | .0       | 5     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .2       | .3       | *        | 19    | .0       | .7        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .5       | .1       | .0       | 22    | .0       | .8        |
| 6                  | .0       | .0       | .0       | .1       | .3       | .5       | .0       | .0       | 27    | .0       | 1.0       |
| 5                  | .0       | .0       | *        | .2       | 1.1      | .7       | *        | .0       | 57    | *        | 2.0       |
| 4                  | .0       | .0       | .0       | .4       | 3.1      | .7       | .0       | .0       | 115   | .1       | 4.1       |
| 3                  | .0       | .0       | *        | 1.1      | 4.3      | .8       | .0       | .0       | 172   | *        | 6.3       |
| 2                  | .0       | .0       | .1       | 3.0      | 7.5      | .5       | .0       | .0       | 305   | .3       | 10.9      |
| 1                  | .0       | .1       | *        | 5.3      | 6.0      | .3       | *        | .0       | 321   | .3       | 11.4      |
| 0                  | .0       | .0       | .4       | 9.5      | 5.7      | .1       | .0       | .0       | 429   | .3       | 15.4      |
| -1                 | .0       | .0       | 1.2      | 9.3      | 2.2      | .1       | .0       | .0       | 350   | .2       | 12.6      |
| -2                 | .0       | .0       | 1.6      | 7.5      | 1.4      | .1       | .0       | .0       | 288   | .1       | 10.4      |
| -3                 | .0       | *        | 2.4      | 4.9      | .6       | .0       | .0       | .0       | 219   | .1       | 7.9       |
| -4                 | .0       | *        | 2.0      | 2.8      | .5       | .0       | .0       | .0       | 145   | .1       | 5.2       |
| -5                 | .0       | .2       | 1.9      | 1.4      | .3       | .0       | .0       | .0       | 101   | *        | 3.7       |
| -6                 | .0       | .3       | 1.0      | .6       | .1       | .0       | .0       | .0       | 56    | .0       | 2.0       |
| -7/-8              | *        | .7       | .8       | .8       | .2       | .0       | .0       | .0       | 72    | .0       | 2.6       |
| -9/-10             | .0       | .3       | .2       | .2       | .1       | .0       | .0       | .0       | 19    | .0       | .7        |
| -11/-13            | .0       | .2       | .1       | .1       | .1       | .0       | .0       | .0       | 13    | .0       | .5        |
| TOTAL              | 1        |          | 324      |          | 924      |          | .5       |          | 2736  | 46       | 2690      |
| PCT                | *        | 1.8      | 11.8     | 47.3     | 33.8     | 4.6      | .5       | .1       | 100.0 | 1.7      | 98.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |     | PCT | NE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .0  | .3   | .1    | .0    | .0    | .0  | .4  |     | .1  | .6   | .1    | .0    | .0    | .0  | .0 | .8  |
| 1-2     | .1  | .6   | .1    | .0    | .0    | .0  | .8  |     | .1  | 1.5  | .8    | .0    | .0    | .0  | .0 | 2.4 |
| 3-4     | .0  | .6   | .7    | .1    | .0    | .0  | 1.4 |     | .0  | .9   | 1.6   | .4    | .0    | .0  | .0 | 2.9 |
| 5-6     | .0  | .1   | .4    | .1    | .0    | .0  | .6  |     | .0  | .1   | 1.0   | .2    | .0    | .0  | .0 | 1.3 |
| 7       | .0  | .0   | .4    | .0    | .0    | .0  | .4  |     | .0  | .0   | .6    | .2    | .0    | .0  | .0 | .8  |
| 8-9     | .0  | .0   | .3    | .1    | .0    | .0  | .4  |     | .0  | .0   | .2    | .3    | .0    | .0  | .0 | .5  |
| 10-11   | .0  | .0   | .0    | .1    | .2    | .0  | .3  |     | .0  | .0   | .1    | .1    | .0    | .0  | .0 | .2  |
| 12      | .0  | .1   | .0    | .0    | .0    | .0  | .1  |     | .0  | .0   | .0    | .3    | .1    | .0  | .0 | .4  |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1  |     | .0  | .0   | .0    | .1    | .1    | .0  | .0 | .2  |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1  |     | .0  | .0   | .0    | .0    | *     | .0  | *  | *   |
| 20-22   | .0  | .0   | .0    | .0    | .1    | .0  | .1  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .1  | 1.7  | 2.0   | .5    | .3    | .0  | 4.6 |     | .2  | 3.2  | 4.3   | 1.6   | .2    | .0  | .0 | 9.5 |

| HGT     | E   |      |       |       |       |     |      | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .1  | .6   | .0    | .0    | .0    | .0  | .7   |     | .0  | .5   | .0    | .0    | .0    | .0  | .0 | .5  |
| 1-2     | .0  | 1.8  | 1.0   | .0    | .0    | .0  | 2.8  |     | .1  | 1.3  | .7    | .0    | .0    | .0  | .0 | 2.1 |
| 3-4     | .0  | 1.3  | 3.0   | .3    | .0    | .0  | 4.6  |     | .0  | .9   | 1.9   | .2    | .0    | .0  | .0 | 3.0 |
| 5-6     | .0  | .0   | 1.2   | .1    | .0    | .0  | 1.3  |     | .0  | .1   | 1.6   | .4    | .0    | .0  | .0 | 2.1 |
| 7       | .0  | .0   | .6    | .1    | .0    | .0  | .7   |     | .0  | .2   | .5    | .7    | .0    | .1  | .1 | 1.4 |
| 8-9     | .0  | .0   | .3    | .2    | .0    | .0  | .5   |     | .0  | .0   | .0    | *     | .0    | .0  | *  | *   |
| 10-11   | .0  | .0   | .1    | .2    | .0    | .0  | .2   |     | .0  | .0   | .0    | .1    | .0    | .0  | .0 | .1  |
| 12      | .0  | .0   | .0    | .1    | .1    | .0  | .1   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 13-16   | .0  | .0   | .0    | .1    | .1    | .0  | .1   |     | .0  | .0   | .0    | .1    | .0    | .0  | .0 | .1  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .1  | 3.7  | 6.3   | 1.0   | .1    | .0  | 11.1 |     | .1  | 3.0  | 4.7   | 1.5   | .0    | .1  | .0 | 9.4 |

PERIOD: (OVER-ALL) 1963-1973

MARCH

AREA 0001 AZORES  
38.0N 26.6W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |      |  | SW  |      |       |       |       |     |      |  |
|---------|-----|------|-------|-------|-------|-----|------|--|-----|------|-------|-------|-------|-----|------|--|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |
| <1      | .2  | .5   | .3    | .0    | .0    | .0  | 1.0  |  | .2  | .8   | .1    | .0    | .0    | .0  | 1.0  |  |
| 1-2     | .1  | 1.0  | .9    | .0    | .0    | .0  | 2.0  |  | .2  | 1.3  | 1.0   | .0    | .0    | .0  | 2.5  |  |
| 3-4     | .0  | .9   | 2.0   | .3    | .0    | .0  | 3.1  |  | .0  | 1.4  | 3.6   | .5    | .0    | .0  | 5.5  |  |
| 5-6     | .0  | .1   | 1.7   | .2    | .0    | .0  | 1.9  |  | .0  | .4   | 3.3   | 1.5   | .0    | .0  | 5.2  |  |
| 7       | .0  | .0   | .9    | .7    | .1    | .0  | 1.7  |  | .0  | .0   | 1.9   | 1.2   | .1    | .0  | 3.2  |  |
| 8-9     | .0  | .0   | .3    | .2    | .0    | .0  | .5   |  | .0  | .0   | .3    | 1.0   | .1    | .0  | 1.5  |  |
| 10-11   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |  | .0  | .0   | .4    | .9    | .7    | .0  | 2.0  |  |
| 12      | .0  | .1   | .0    | .1    | .0    | .0  | .2   |  | .0  | .0   | .1    | .4    | .2    | .0  | .7   |  |
| 13-16   | .0  | .0   | .0    | .1    | .1    | .0  | .1   |  | .0  | .0   | .1    | .7    | .6    | *   | 1.4  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .3    | .1  | .4   |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | *     | .1    | .0  | .1   |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .1    | .0  | .1   |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| TOT PCT | .3  | 2.6  | 6.1   | 1.5   | .2    | .0  | 10.8 |  | .3  | 3.9  | 10.8  | 6.3   | 2.1   | .1  | 23.6 |  |

| HGT     | W   |      |       |       |       |     |      |  | NW  |      |       |       |       |     |     |      | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|--|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .2  | .5   | .2    | .0    | .0    | .0  | .8   |  | .1  | .2   | .1    | .0    | .0    | .0  | .3  |      |           |
| 1-2     | .1  | 1.6  | .7    | .0    | .0    | .0  | 2.4  |  | .1  | 1.3  | .6    | .0    | .0    | .0  | 2.0 |      |           |
| 3-4     | .0  | 1.6  | 3.1   | .3    | .0    | .0  | 5.1  |  | .1  | 1.4  | 1.0   | .2    | .0    | .0  | 2.6 |      |           |
| 5-6     | .0  | .2   | 3.3   | 1.2   | .1    | .0  | 4.9  |  | .0  | .1   | .9    | .3    | .0    | .0  | 1.3 |      |           |
| 7       | .0  | .0   | 1.4   | 1.2   | .3    | .0  | 2.9  |  | .0  | .2   | .5    | .5    | .0    | .0  | 1.1 |      |           |
| 8-9     | .0  | .1   | .9    | .7    | .0    | .0  | 1.7  |  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |      |           |
| 10-11   | .0  | .0   | .2    | .5    | .2    | .0  | 1.0  |  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |      |           |
| 12      | .0  | .0   | .3    | .2    | .4    | .0  | 1.0  |  | .0  | *    | *     | .3    | .0    | .0  | .3  |      |           |
| 13-16   | .0  | .0   | .1    | .6    | .2    | .1  | .9   |  | .0  | .0   | .0    | .1    | .1    | .0  | .2  |      |           |
| 17-19   | .0  | .0   | .1    | .1    | .1    | .0  | .2   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .1    | .0  | .1  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .3  | 4.0  | 10.3  | 4.9   | 1.2   | .1  | 20.8 |  | .3  | 3.1  | 3.1   | 1.5   | .2    | .0  | 8.2 | 98.0 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.5 | 3.9  | .9    | .0    | .0    | .0  | 8.3   |         |
| 1-2     | .8  | 10.4 | 5.8   | .0    | .0    | .0  | 16.9  |         |
| 3-4     | .1  | 8.9  | 16.9  | 2.2   | .0    | .0  | 28.1  |         |
| 5-6     | .0  | 1.1  | 13.2  | 4.1   | .1    | .0  | 18.5  |         |
| 7       | .0  | .3   | 6.7   | 4.5   | .5    | .1  | 12.1  |         |
| 8-9     | .0  | .1   | 2.4   | 2.7   | .1    | .0  | 5.3   |         |
| 10-11   | .0  | .0   | .8    | 2.1   | 1.1   | .0  | 4.0   |         |
| 12      | .0  | .2   | .4    | 1.3   | .8    | .0  | 2.7   |         |
| 13-16   | .0  | .0   | .2    | 1.7   | 1.0   | .1  | 3.0   |         |
| 17-19   | .0  | .0   | .1    | .1    | .4    | .1  | .7    |         |
| 20-22   | .0  | .0   | .0    | .1    | .2    | .0  | .3    |         |
| 23-25   | .0  | .0   | .0    | .0    | .1    | .0  | .1    |         |
| 26-32   | .0  | .0   | .0    | .0    | .1    | .0  | .1    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.4 | 24.9 | 47.3  | 18.8  | 4.4   | .3  | 100.0 | 1157    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.4 | 5.7 | 9.1  | 5.1  | 2.3  | .9   | .5    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 545   | 4        |
| 6-7          | .0  | .7  | 3.7  | 6.3  | 5.2  | 2.9  | 1.8   | .9  | .9    | .1    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 492   | 7        |
| 8-9          | .0  | .0  | 1.4  | 2.3  | 4.8  | 4.0  | 2.6   | 2.0 | 1.9   | .4    | .3    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 428   | 9        |
| 10-11        | .0  | .1  | .4   | 1.3  | 1.2  | 2.3  | 2.3   | 1.3 | 1.7   | .4    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 243   | 10       |
| 12-13        | .0  | .0  | .2   | .5   | .3   | .4   | .8    | .7  | 1.1   | .1    | .2    | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 95    | 11       |
| >13          | .0  | .0  | .0   | .2   | .2   | .2   | .4    | .6  | .5    | .0    | .2    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 52    | 13       |
| INDET        | 1.7 | 1.0 | 2.4  | 2.6  | 2.1  | 1.2  | 1.0   | .5  | .8    | .4    | .2    | *     | .0    | *     | .0    | .0    | .0    | .0    | .0  | 298   | 6        |
| TOTAL        | 67  | 162 | 369  | 391  | 345  | 254  | 203   | 133 | 151   | 30    | 30    | 10    | 7     | 1     | 0     | 0     | 0     | 0     | 0   | 2153  | 7        |
| PCT          | 3.1 | 7.5 | 17.1 | 18.2 | 16.0 | 11.8 | 9.4   | 6.2 | 7.0   | 1.4   | 1.4   | .5    | .3    | *     | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1929-1973  
(OVER-ALL) 1857-1973

APRIL

AREA 0001 AZORES  
38.0N 20.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 | NO SIG WEA |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FUG WU PCPN | FUG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST |            |
| N        | .4                 | 2.3       | .8   | .0        | .0   | .0              | .0   | 3.6                     | 2.5            | .0        | .8          | .0                  | .7         | .3              | 92.2       |
| NE       | .4                 | .0        | 1.5  | .0        | .0   | .0              | .0   | 2.5                     | 1.5            | .0        | .3          | .0                  | .4         | .0              | 95.2       |
| E        | 2.3                | 1.6       | 2.7  | .0        | .0   | .0              | .0   | 5.7                     | 2.4            | .3        | .2          | .0                  | 2.1        | .0              | 89.6       |
| SE       | 2.7                | 2.1       | 3.4  | .0        | .0   | .0              | .0   | 7.6                     | 3.4            | .7        | 1.6         | .0                  | 1.4        | .0              | 85.3       |
| S        | 3.8                | 1.5       | 3.1  | .0        | .0   | .0              | .0   | 8.0                     | 3.4            | .1        | 1.0         | .0                  | .7         | .0              | 86.7       |
| SW       | 4.1                | 1.5       | 4.0  | .0        | .0   | .0              | .0   | 9.3                     | 3.4            | .1        | 1.8         | .3                  | 3.4        | .0              | 81.7       |
| W        | 2.6                | 1.4       | 1.6  | .0        | .0   | .0              | .0   | 5.4                     | 4.4            | .3        | 1.9         | .1                  | 3.0        | .0              | 84.9       |
| NW       | .7                 | 1.6       | 1.3  | .0        | .0   | .0              | .0   | 3.6                     | 4.1            | .0        | .9          | .0                  | .6         | .1              | 90.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | 3.3                | .0        | .0   | .0        | .0   | .0              | .0   | 3.3                     | 1.7            | .0        | 1.7         | .0                  | 3.3        | .0              | 90.0       |
| TOT PCT  | 2.4                | 1.5       | 2.3  | .0        | .0   | .0              | .0   | 5.9                     | 3.3            | .2        | 1.2         | .1                  | 1.8        | *               | 87.6       |
| TOT OBS: | 2877               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 | NO SIG WEA |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FUG WU PCPN | FUG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST |            |
| 00003      | 1.3                | 1.6       | 1.4  | .0        | .0   | .0              | .0   | 4.3                     | 3.4            | .3        | 1.3         | .1                  | 1.1        | .0              | 89.6       |
| 06009      | 2.5                | 1.5       | 2.7  | .0        | .0   | .0              | .0   | 6.4                     | 4.3            | .3        | 1.9         | .1                  | 1.8        | .0              | 85.2       |
| 12015      | 2.9                | 1.7       | 2.4  | .0        | .0   | .0              | .0   | 6.5                     | 2.2            | .1        | .8          | .0                  | 1.3        | .0              | 89.0       |
| 18021      | 2.6                | 1.6       | 2.7  | .0        | .0   | .0              | .0   | 6.7                     | 3.1            | .0        | .9          | .0                  | 2.6        | .1              | 86.6       |
| TOT PCT    | 2.3                | 1.6       | 2.3  | .0        | .0   | .0              | .0   | 6.0                     | 3.2            | .2        | 1.2         | .1                  | 1.7        | *               | 87.6       |
| TOT OBS:   | 2940               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    | 00   |       |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .5                 | 3.9  | 4.2   | 1.5   | .2    | .0 |      | 10.3  | 13.9      |          | 7.7      | 10.0       | 10.4  | 15.5  | 10.6  | 15.4  | 9.1   | 9.9   |
| NE       | .3                 | 4.7  | 4.5   | .6    | .0    | .0 |      | 10.2  | 12.1      |          | 10.3     | 11.8       | 8.9   | 9.8   | 10.8  | 8.7   | 11.1  | 9.6   |
| E        | .4                 | 4.7  | 3.7   | .6    | .0    | .0 |      | 9.4   | 11.5      |          | 9.6      | 8.2        | 9.2   | 8.5   | 9.5   | 9.1   | 10.7  | 7.6   |
| SE       | .3                 | 4.2  | 3.6   | .5    | .0    | .0 |      | 8.6   | 11.7      |          | 9.4      | 9.2        | 7.6   | 7.8   | 9.6   | 6.8   | 9.4   | 7.2   |
| S        | .7                 | 4.3  | 6.0   | 1.8   | .2    | .0 |      | 13.0  | 13.9      |          | 14.9     | 10.1       | 13.4  | 8.4   | 15.3  | 13.1  | 12.5  | 10.9  |
| SW       | .8                 | 6.0  | 6.8   | 3.0   | .4    | .0 |      | 17.0  | 14.5      |          | 18.2     | 18.0       | 18.0  | 17.9  | 15.4  | 16.9  | 15.9  | 17.4  |
| W        | .6                 | 5.0  | 6.5   | 3.3   | .7    | .1 |      | 16.2  | 16.1      |          | 17.1     | 12.2       | 16.6  | 13.4  | 16.1  | 13.5  | 17.5  | 17.7  |
| NW       | .4                 | 3.8  | 5.8   | 2.1   | .7    | .1 |      | 12.8  | 16.2      |          | 10.3     | 18.3       | 12.6  | 17.7  | 10.6  | 15.7  | 11.5  | 16.2  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.4                |      |       |       |       |    |      | 2.4   | .0        |          | 2.6      | 2.1        | 3.3   | 1.1   | 2.2   | .7    | 2.2   | 3.4   |
| TOT OBS  | 273                | 1563 | 1756  | 581   | 95    | 9  | 4277 |       | 13.7      |          | 665      | 280        | 845   | 277   | 734   | 274   | 911   | 291   |
| TOT PCT  | 6.4                | 36.5 | 41.1  | 13.6  | 2.2   | .2 |      | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |      |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |
|----------|--------------------|------|-------|-------|-----|------|-------|-----------|----------|----------|------------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |      |       |           |          |          | 00         | 03    | 09    | 18 |
| N        | 2.0                | 5.0  | 2.6   | .7    | .1  |      | 10.3  | 13.9      |          | 8.4      | 11.6       | 11.9  | 9.3   |    |
| NE       | 1.8                | 6.5  | 1.7   | .3    | .0  |      | 10.2  | 12.1      |          | 10.7     | 9.1        | 10.2  | 10.8  |    |
| E        | 2.2                | 5.3  | 1.7   | .2    | .0  |      | 9.4   | 11.5      |          | 9.2      | 9.0        | 9.4   | 9.9   |    |
| SE       | 1.9                | 4.9  | 1.7   | .1    | .0  |      | 8.6   | 11.7      |          | 9.3      | 7.6        | 8.8   | 8.8   |    |
| S        | 2.1                | 6.7  | 3.4   | .8    | .0  |      | 13.0  | 13.9      |          | 13.5     | 12.2       | 14.7  | 12.1  |    |
| SW       | 2.7                | 8.6  | 4.4   | 1.2   | .1  |      | 17.0  | 14.5      |          | 18.1     | 17.9       | 15.8  | 16.3  |    |
| W        | 2.4                | 6.8  | 4.9   | 1.8   | .3  |      | 16.2  | 16.1      |          | 15.6     | 15.8       | 15.4  | 17.6  |    |
| NW       | 1.6                | 6.1  | 3.4   | 1.5   | .2  |      | 12.8  | 16.2      |          | 12.7     | 13.9       | 12.0  | 12.6  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      | .0    | .0        |          | .0       | .0         | .0    | .0    |    |
| CALM     | 2.4                | .0   | .0    | .0    | .0  |      | 2.4   | .0        |          | 2.4      | 2.8        | 1.8   | 2.5   |    |
| TOT OBS  | 820                | 2133 | 1014  | 282   | 28  | 4277 |       | 13.7      |          | 945      | 1122       | 1008  | 1202  |    |
| TOT PCT  | 19.2               | 49.9 | 23.7  | 6.6   | .7  |      | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1929-1973  
(OVER-ALL) 1857-1973

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38.0N 26.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 2.4  | 3.7 | 38.6 | 39.8               | 13.0  | 2.3   | .1  | 13.4  | 100.0    | 945       |
| 06009 | 2.8  | 4.8 | 38.9 | 39.0               | 12.1  | 2.1   | .2  | 13.2  | 100.0    | 1122      |
| 12015 | 1.8  | 4.2 | 32.3 | 45.0               | 13.9  | 2.6   | .2  | 14.4  | 100.0    | 1008      |
| 18021 | 2.5  | 3.3 | 36.2 | 40.6               | 15.1  | 1.9   | .3  | 13.9  | 100.0    | 1202      |
| TOT   | 102  | 171 | 156  | 176                | 581   | 95    | 9   | 13.7  |          | 4277      |
| PCT   | 2.4  | 4.0 | 36.5 | 41.1               | 13.6  | 2.2   | .2  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
|          |      |      |      |      |           |                  |
| N        | 1.6  | 2.0  | 3.3  | 2.0  | 5.1       | 5.4              |
| NE       | 1.5  | 2.3  | 4.4  | 2.5  | 5.4       | 5.2              |
| E        | 1.8  | 2.0  | 3.5  | 2.7  | 5.4       | 5.4              |
| SE       | 1.7  | 1.2  | 3.0  | 2.8  | 5.4       | 5.8              |
| S        | 2.0  | 2.2  | 4.4  | 5.6  | 5.4       | 5.4              |
| SW       | 2.6  | 2.5  | 5.4  | 4.9  | 5.0       | 4.8              |
| W        | 3.6  | 4.8  | 5.9  | 4.7  | 4.8       | 4.0              |
| NW       | 2.1  | 2.9  | 3.7  | 1.7  | 3.2       | 5.2              |
| VAR      | 0.0  | 0.0  | 0.0  | 0.0  |           |                  |
| CALM     | 1.3  | 0.2  | 0.3  | 0.5  |           |                  |
| TOT OBS  | 419  | 464  | 783  | 639  | 2305      |                  |
| TOT PCT  | 18.2 | 20.1 | 34.0 | 27.7 | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| WIND DIR | 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 ANY HGT | TOTAL OBS |
|----------|-----|-----|-----|------|------|------|------|------|------|-------|------------------|-----------|
|          |     |     |     |      |      |      |      |      |      |       |                  |           |
| N        | 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 | 8000+ | 4.9              |           |
| NE       | .1  | .2  | .2  | .7   | 1.4  | 1.1  | .4   | .1   | .0   | .1    | 5.1              |           |
| E        | .0  | .1  | .2  | .8   | 2.2  | 1.0  | .3   | .1   | .0   | .0    | 5.3              |           |
| SE       | .2  | .3  | .3  | .9   | 1.1  | 1.0  | .4   | .3   | .0   | .0    | 4.4              |           |
| S        | .1  | .1  | .4  | 1.9  | 2.7  | 1.8  | .6   | .0   | .1   | .1    | 6.2              |           |
| SW       | .1  | .4  | .4  | 1.6  | 2.7  | 1.4  | .7   | .2   | .1   | .1    | 8.0              |           |
| W        | .2  | .0  | .5  | 2.0  | 3.3  | 1.6  | .3   | .2   | .1   | .1    | 10.7             |           |
| NW       | .0  | .0  | .2  | .8   | 1.8  | .9   | .4   | .1   | .0   | .1    | 6.2              |           |
| VAR      | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 1.7              |           |
| CALM     | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 1.7              |           |
| TOT OBS  | 18  | 9   | 55  | 232  | 414  | 230  | 79   | 31   | 9    | 15    | 1213             | 2305      |
| TOT PCT  | .8  | .4  | 2.4 | 10.1 | 18.0 | 10.0 | 3.4  | 1.3  | .4   | .7    | 52.6             | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VISBY (NM)

| CEILING (FEET) | VISBY (NM) |      |      |      |       |       |        |      |
|----------------|------------|------|------|------|-------|-------|--------|------|
|                | > 10       | > 5  | > 2  | > 1  | > 1/2 | > 1/4 | > 50YD | > 0  |
| > 6500         | .9         | 1.1  | 1.1  | 1.1  | 1.1   | 1.1   | 1.1    | 1.1  |
| > 5000         | 2.0        | 2.4  | 2.4  | 2.4  | 2.4   | 2.4   | 2.4    | 2.4  |
| > 3500         | 4.9        | 5.7  | 5.9  | 5.9  | 5.9   | 5.9   | 5.9    | 5.9  |
| > 2000         | 12.5       | 15.3 | 15.7 | 15.8 | 15.8  | 15.8  | 15.8   | 15.8 |
| > 1000         | 25.3       | 32.5 | 33.4 | 33.6 | 33.7  | 33.7  | 33.7   | 33.7 |
| > 600          | 31.3       | 41.9 | 43.3 | 43.6 | 43.6  | 43.7  | 43.7   | 43.8 |
| > 300          | 32.3       | 44.0 | 45.8 | 46.0 | 46.1  | 46.1  | 46.2   | 46.2 |
| > 150          | 32.5       | 44.3 | 46.2 | 46.4 | 46.5  | 46.5  | 46.6   | 46.6 |
| > 0            | 32.7       | 44.7 | 46.6 | 47.0 | 47.0  | 47.2  | 47.3   | 47.4 |
| TOTAL          | 764        | 1043 | 1088 | 1097 | 1098  | 1101  | 1105   | 1106 |

TOTAL NUMBER OF OBS: 2335

PCT FREQ NH < 5/8: 52.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4    | 5   | 6   | 7    | 8    | OBSCD | TOTAL OBS |
|-----|-----|------|------|------|-----|-----|------|------|-------|-----------|
| 7.9 | 8.8 | 11.4 | 13.0 | 10.9 | 7.5 | 9.0 | 10.9 | 20.1 | .4    | 2491      |



PERIOD: (PRIMARY) 1929-1973  
(OVER-ALL) 1857-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .1   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | *    | .0   | *   | .1   | *    | .1   | .0   | .0  | .0   | .2    |              |
|              | TOT %  | .0   | *    | .0   | *   | .1   | *    | .1   | .0   | .0  | .0   | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | *    | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | NO PCP | .0   | .0   | *    | *   | *    | .1   | .1   | *    | .0  | .0   | .3    |              |
|              | TOT %  | .0   | .0   | *    | *   | .1   | .1   | .1   | *    | .0  | .0   | .3    |              |
| 1<2          | PCP    | *    | .0   | .0   | .0  | .1   | .2   | .1   | .0   | .0  | .0   | .4    |              |
|              | NO PCP | .0   | .0   | *    | *   | *    | .1   | .0   | .0   | .0  | .0   | .2    |              |
|              | TOT %  | *    | .0   | *    | *   | .1   | .3   | .1   | .0   | .0  | .0   | .6    |              |
| 2<5          | PCP    | .0   | *    | .2   | .2  | .2   | .3   | .1   | .1   | .0  | *    | 1.2   |              |
|              | NO PCP | .2   | .1   | .1   | .1  | .3   | .3   | .4   | .1   | .0  | .0   | 1.5   |              |
|              | TOT %  | .2   | .1   | .3   | .3  | .5   | .6   | .5   | .2   | .0  | *    | 2.7   |              |
| 5<10         | PCP    | .2   | .2   | .2   | .3  | .6   | .8   | .5   | .2   | .0  | .0   | 2.9   |              |
|              | NO PCP | 1.8  | 1.7  | 1.4  | 1.5 | 2.9  | 4.1  | 3.4  | 2.0  | .0  | .1   | 18.8  |              |
|              | TOT %  | 2.0  | 1.8  | 1.6  | 1.7 | 3.4  | 4.8  | 3.9  | 2.2  | .0  | .1   | 21.7  |              |
| 10+          | PCP    | .1   | .1   | .2   | .2  | .3   | .2   | .1   | .0   | *   | 1.3  |       |              |
|              | NO PCP | 7.0  | 8.0  | 7.9  | 6.5 | 9.6  | 10.7 | 12.9 | 8.7  | .0  | 1.9  | 73.1  |              |
|              | TOT %  | 7.0  | 8.1  | 8.0  | 6.7 | 9.8  | 10.9 | 13.1 | 8.8  | .0  | 1.9  | 74.4  |              |
| TOT OBS      |        | 2871 |      |      |     |      |      |      |      |     |      |       |              |
| TOT PCT      |        | 9.3  | 10.0 | 10.0 | 8.8 | 14.1 | 16.7 | 17.8 | 11.2 | .0  | 2.1  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | *    | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | *    | .0  | .1  | *    | .1   | .0   | *    | .0  | .0   | .2    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0   | .0   | *    | *    | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | *    | *    | *    | *    | .0  | .0   | .1    |              |
|              | TOT %      | .0   | *    | .0  | .1  | .1   | *    | .1   | *    | .0  | .0   | .4    |              |
| 1/2<1        | 0-3        | *    | .0   | .0  | .0  | .0   | .0   | *    | *    | .0  | .0   | *     |              |
|              | 4-10       | .0   | .0   | *   | *   | .0   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | *    | *    | *    | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | *    | *    | *    | .1   | .0  | .0   | .1    |              |
|              | TOT %      | *    | .0   | *   | *   | *    | .1   | .1   | .1   | .0  | .0   | .3    |              |
| 1<2          | 0-3        | *    | .0   | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | .0   | .0  | *   | .1   | .1   | *    | .0   | .0  | .0   | .2    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0   | .2   | *    | *    | .0  | .0   | .2    |              |
|              | 22+        | *    | .0   | *   | .0  | .1   | .1   | *    | *    | .0  | .0   | .3    |              |
|              | TOT %      | .1   | .0   | *   | *   | .2   | .3   | .1   | *    | .0  | .0   | .8    |              |
| 2<5          | 0-3        | .0   | .0   | *   | *   | .1   | .0   | .0   | .0   | .0  | *    | .1    |              |
|              | 4-10       | .1   | *    | *   | *   | .1   | .2   | *    | .0   | .0  | *    | .5    |              |
|              | 11-21      | *    | .1   | .2  | .2  | .2   | .3   | .2   | .1   | .0  |      | 1.2   |              |
|              | 22+        | .1   | *    | .1  | .1  | .2   | .2   | .3   | .2   | .0  |      | 1.1   |              |
|              | TOT %      | .2   | .1   | .3  | .3  | .6   | .6   | .5   | .2   | .0  | *    | 3.0   |              |
| 5<10         | 0-3        | .1   | .1   | *   | *   | .2   | .1   | *    | .1   | .0  | .2   | .9    |              |
|              | 4-10       | .5   | .7   | .7  | .5  | 1.0  | 1.5  | .8   | .6   | .0  |      | 6.4   |              |
|              | 11-21      | .8   | .8   | .7  | 1.0 | 1.6  | 1.9  | .8   | .0   |     |      | 9.1   |              |
|              | 22+        | .5   | .3   | .1  | .2  | .7   | 1.2  | 1.3  | 1.0  | .0  |      | 5.3   |              |
|              | TOT %      | 2.0  | 1.8  | 1.7 | 1.7 | 3.5  | 4.7  | 3.6  | 2.5  | .0  | .2   | 21.8  |              |
| 10+          | 0-3        | .2   | .2   | .3  | .3  | .5   | .5   | .5   | .2   | .0  | 2.0  | 4.7   |              |
|              | 4-10       | 3.1  | 3.7  | 3.8 | 4.0 | 3.3  | 3.6  | 4.0  | 2.8  | .0  |      | 28.4  |              |
|              | 11-21      | 3.0  | 3.8  | 3.1 | 2.8 | 4.6  | 4.5  | 5.2  | 4.7  | .0  |      | 31.8  |              |
|              | 22+        | .9   | .4   | .3  | .2  | .9   | 1.6  | 3.1  | 1.6  | .0  |      | 9.0   |              |
|              | TOT %      | 7.2  | 8.1  | 7.6 | 7.3 | 9.3  | 10.2 | 12.7 | 9.4  | .0  | 2.0  | 73.8  |              |
| TOT OBS      |            | 3544 |      |     |     |      |      |      |      |     |      |       |              |
| TOT PCT      |            | 9.5  | 10.1 | 9.6 | 9.5 | 13.8 | 16.0 | 17.1 | 12.2 | .0  | 2.3  | 100.0 |              |

PERIOD: (PRIMARY) 1929-1973  
(OVER-ALL) 1857-1973

APRIL

AREA 0001 AZORES  
36.0N 20.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | 1.1        | .4         | 2.7        | 8.0        | 15.9         | 8.0          | 3.4          | .9           | .5           | .7    | 41.3  | 58.7               | 566          |
| 06009          | .8         | .4         | 2.0        | 10.1       | 18.8         | 9.7          | 3.6          | 2.2          | .2           | .4    | 48.0  | 52.0               | 506          |
| 12015          | .9         | .5         | 2.0        | 10.5       | 17.9         | 10.1         | 3.0          | 1.8          | .2           | .8    | 47.5  | 52.5               | 665          |
| 18021          | .3         | .3         | 2.8        | 10.2       | 17.2         | 10.9         | 3.4          | .6           | .6           | .7    | 47.2  | 52.8               | 667          |
| TOT            | 18         | 9          | 57         | 234        | 419          | 234          | 80           | 32           | 9            | 16    | 1108  | 1296               | 2404         |
| PCT            | .7         | .4         | 2.4        | 9.7        | 17.4         | 9.7          | 3.3          | 1.3          | .4           | .7    | 46.1  | 53.9               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .2   | .1    | .7  | 2.4 | 21.4 | 75.1 | 827          |
| 06009          | .7   | .4    | 1.2 | 3.1 | 21.4 | 73.0 | 893          |
| 12015          | .3   | .3    | .7  | 3.4 | 19.7 | 75.6 | 893          |
| 18021          | .2   | .3    | .5  | 3.2 | 25.5 | 70.3 | 994          |
| TOT            | 13   | 11    | 28  | 110 | 798  | 2647 | 3607         |
| PCT            | .4   | .3    | .8  | 3.0 | 22.1 | 73.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | 1.1           | 4.2        | 14.0        | 29.0            | 57.0              | 544          |
| 06009          | 1.0           | 3.5        | 15.1        | 34.8            | 50.1              | 491          |
| 12015          | .9            | 3.7        | 16.0        | 33.1            | 50.8              | 649          |
| 18021          | .3            | 3.7        | 16.1        | 32.9            | 51.0              | 651          |
| TOT            | 19            | 88         | 359         | 758             | 1218              | 2335         |
| PCT            | .8            | 3.8        | 15.4        | 32.5            | 52.2              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .0    | .*    | .0    | .*    | .0     | 2            | .1          |
| 70/74  | .0   | .0    | .1    | .2    | .6    | .3    | .3    | .0     | 36           | 1.5         |
| 65/69  | .0   | .*    | .1    | .3    | 1.6   | 2.4   | 3.4   | 1.2    | 212          | 8.9         |
| 60/64  | .0   | .0    | .1    | 1.4   | 7.8   | 15.3  | 22.1  | 13.0   | 1424         | 59.7        |
| 55/59  | .0   | .0    | .*    | .8    | 4.6   | 9.4   | 9.0   | 4.8    | 681          | 28.6        |
| 50/54  | .0   | .0    | .0    | .1    | .1    | .3    | .3    | .4     | 29           | 1.2         |
| TOTAL  | 0    | 1     | 7     | 65    | 350   | 661   | 838   | 462    | 2384         | 100.0       |
| PCT    | .0   | .*    | .3    | 2.7   | 14.7  | 27.7  | 35.2  | 19.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N   | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM |
|-----|-----|-----|-----|------|------|------|------|-----|------|
| .0  | .0  | .*  | .0  | .0   | .0   | .*   | .*   | .0  | .0   |
| .1  | .1  | .1  | .*  | .1   | .3   | .5   | .2   | .0  | .*   |
| .4  | .7  | 1.2 | .7  | 1.3  | 1.9  | 1.7  | .6   | .0  | .3   |
| 3.6 | 5.4 | 5.6 | 6.6 | 10.5 | 12.4 | 10.6 | 4.2  | .0  | .9   |
| 4.7 | 3.7 | 2.8 | 1.3 | 2.3  | 2.0  | 5.2  | 5.7  | .0  | .8   |
| .1  | .0  | .1  | .1  | .1   | .*   | .4   | .4   | .0  | .0   |
| 9.0 | 9.8 | 9.8 | 8.7 | 14.3 | 16.6 | 18.6 | 11.2 | .0  | 2.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 74  | 66  | 64  | 60  | 56 | 53 | 52  | 60.0 | 955          |
| 06009          | 78  | 66  | 64  | 60  | 55 | 52 | 51  | 59.7 | 1124         |
| 12015          | 75  | 71  | 68  | 62  | 57 | 55 | 53  | 62.2 | 984          |
| 18021          | 77  | 71  | 67  | 62  | 57 | 54 | 51  | 61.9 | 1183         |
| TOT            | 78  | 70  | 66  | 61  | 56 | 54 | 51  | 60.9 | 4246         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.3   | 7.7   | 25.9  | 40.0  | 24.1   | 83   | 598          |
| 06009         | .0   | 2.0   | 12.4  | 26.1  | 36.3  | 23.2   | 82   | 548          |
| 12015         | .0   | 4.6   | 18.4  | 28.4  | 32.5  | 16.0   | 78   | 630          |
| 18021         | .0   | 3.5   | 19.6  | 29.3  | 32.4  | 15.2   | 79   | 652          |
| TOT           | 0    | 77    | 358   | 668   | 854   | 471    | 80   | 2428         |

PERIOD: (PRIMARY) 1929-1973  
(OVER-ALL) 1857-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .0       | 4     | .0       | .2        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .0       | 8     | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .6       | .0       | .0       | 21    | .0       | .8        |
| 7/8                | .0       | .0       | .0       | .2       | .7       | .3       | .0       | .0       | 32    | .0       | 1.2       |
| 6                  | .0       | .0       | .0       | .3       | .5       | .3       | .0       | .0       | 29    | .0       | 1.1       |
| 5                  | .0       | .0       | .0       | 1.2      | 1.3      | .2       | .0       | .0       | 67    | .0       | 2.6       |
| 4                  | .0       | .0       | .2       | 2.4      | 1.3      | .2       | .0       | .0       | 108   | .0       | 4.2       |
| 3                  | .0       | .0       | .4       | 3.8      | 1.6      | .0       | .0       | .0       | 151   | .0       | 5.8       |
| 2                  | .0       | .0       | 1.3      | 8.1      | .9       | .0       | .0       | .0       | 268   | .2       | 10.1      |
| 1                  | .0       | .1       | 3.2      | 9.2      | .7       | .0       | .0       | .0       | 342   | .1       | 13.0      |
| 0                  | .0       | .3       | 7.3      | 8.7      | .3       | .0       | .0       | .0       | 434   | .3       | 16.4      |
| -1                 | .0       | .5       | 7.2      | 5.5      | .3       | .0       | .0       | .0       | 350   | .3       | 13.2      |
| -2                 | .0       | .8       | 7.6      | 2.3      | .2       | .0       | .0       | .0       | 284   | .2       | 10.7      |
| -3                 | .0       | .9       | 4.7      | 1.6      | .0       | .0       | .0       | .0       | 188   | .0       | 7.2       |
| -4                 | .0       | 1.0      | 3.4      | .8       | .0       | .0       | .0       | .0       | 136   | .0       | 5.2       |
| -5                 | .0       | .9       | 2.0      | .4       | .1       | .0       | .0       | .0       | 87    | .0       | 3.3       |
| -6                 | .1       | .6       | .9       | .2       | .0       | .0       | .0       | .0       | 47    | .0       | 1.8       |
| -7/-8              | .2       | .3       | .6       | .1       | .0       | .0       | .0       | .0       | 31    | .0       | 1.2       |
| -9/-10             | .1       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 9     | .0       | .3        |
| -11/-13            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .0        |
| -14/-16            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .0        |
| TOTAL              | 10       | 1007     | 1163     | 214      | 50       | 1        |          |          | 2598  | 31       | 2567      |
| PCT                | .4       | 5.7      | 38.8     | 44.8     | 8.2      | 1.9      | .2       |          | 100.0 | 1.2      | 98.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .2   | .0    | .0    | .0    | .0  | .5  | .0  | .9   | .2    | .0    | .0    | .0  | 1.1  |
| 1-2     | .0  | 1.6  | .6    | .0    | .0    | .0  | 2.1 | .1  | 2.2  | 1.3   | .0    | .0    | .0  | 3.6  |
| 3-4     | .0  | 1.5  | 1.4   | .1    | .0    | .0  | 3.0 | .0  | 1.0  | 1.8   | .1    | .0    | .0  | 2.9  |
| 5-6     | .0  | .2   | 1.4   | .4    | .0    | .0  | 2.0 | .0  | .5   | 1.8   | .0    | .0    | .0  | 2.3  |
| 7       | .0  | .0   | .6    | .4    | .0    | .0  | 1.0 | .0  | .0   | .7    | .2    | .0    | .0  | .9   |
| 8-9     | .0  | .0   | .2    | .3    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .1    | .0    | .0    | .0  | .1   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 3.4  | 4.1   | 1.2   | .1    | .0  | 9.1 | .1  | 4.5  | 5.9   | .4    | .0    | .0  | 10.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .6   | .0    | .0    | .0    | .0  | .7  | .1  | 1.0  | .0    | .0    | .0    | .0  | 1.2 |
| 1-2     | .1  | 2.6  | .5    | .0    | .0    | .0  | 3.1 | .0  | 2.3  | .6    | .0    | .0    | .0  | 3.0 |
| 3-4     | .0  | 1.2  | 1.5   | .0    | .0    | .0  | 2.7 | .0  | .6   | 2.1   | .0    | .0    | .0  | 2.8 |
| 5-6     | .0  | .2   | 1.1   | .2    | .0    | .0  | 1.4 | .0  | .1   | .9    | .0    | .0    | .0  | 1.0 |
| 7       | .0  | .0   | .5    | .0    | .0    | .0  | .5  | .0  | .1   | .0    | .1    | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .1    | .2    | .0    | .0  | .3  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 4.6  | 3.6   | .5    | .0    | .0  | 8.8 | .2  | 4.3  | 3.7   | .2    | .0    | .0  | 8.3 |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .5   | .1    | .0    | .0    | .0  | .9   | .0  | .5   | .3    | .0    | .0    | .0  | .8   |
| 1-2     | .0  | 2.6  | .7    | .0    | .0    | .0  | 3.3  | .2  | 2.4  | .6    | .0    | .0    | .0  | 3.2  |
| 3-4     | .0  | 1.2  | 2.9   | .1    | .0    | .0  | 4.2  | .0  | 1.6  | 3.6   | .5    | .0    | .0  | 5.5  |
| 5-6     | .0  | .3   | 1.5   | .6    | .0    | .0  | 2.3  | .0  | .8   | 1.5   | .5    | .0    | .0  | 2.8  |
| 7       | .0  | .0   | .8    | .5    | .0    | .0  | 1.2  | .0  | .0   | .9    | .8    | .0    | .0  | 1.7  |
| 8-9     | .0  | .0   | .3    | .7    | .0    | .0  | 1.0  | .0  | .0   | .3    | .5    | .2    | .0  | .9   |
| 10-11   | .0  | .0   | .0    | .5    | .1    | .0  | .6   | .0  | .0   | .2    | .7    | *     | .0  | 1.0  |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .0    | .4    | .0    | .0  | .4   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | *   | .1   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .2    | .0  | .2   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | *     | .0  | *    |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 4.6  | 6.3   | 2.4   | .1    | .0  | 13.6 | .2  | 5.1  | 7.3   | 3.5   | .6    | *   | 16.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .2  | 1.2  | .0    | .0    | .0    | .0  | 1.4  | .1  | .3   | .0    | .0    | .0    | .0  | .4   |           |
| 1-2     | .1  | 2.0  | .8    | .0    | .0    | .0  | 2.9  | .1  | 2.2  | .4    | .0    | .0    | .0  | 2.7  |           |
| 3-4     | .0  | 1.5  | 3.4   | .3    | .0    | .0  | 5.1  | .0  | .6   | 2.1   | .3    | .0    | .0  | 3.0  |           |
| 5-6     | .0  | .0   | 1.8   | .5    | .0    | .0  | 2.3  | .0  | *    | 2.0   | .2    | .0    | .0  | 2.2  |           |
| 7       | .0  | .0   | 1.0   | 1.6   | .0    | .0  | 2.7  | .0  | .2   | 1.0   | .2    | .0    | .0  | 1.5  |           |
| 8-9     | .0  | .0   | .3    | .6    | .5    | .0  | 1.4  | .0  | .0   | .2    | .3    | *     | .1  | .6   |           |
| 10-11   | .0  | .0   | .1    | 1.0   | .3    | .0  | 1.4  | .0  | .0   | .0    | .5    | .0    | .0  | .5   |           |
| 12      | .0  | .0   | .2    | .3    | .0    | .0  | .5   | .0  | .0   | .1    | .0    | .0    | .0  | .1   |           |
| 13-16   | .0  | .0   | .1    | .2    | .0    | .0  | .3   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .3    | .1  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |           |
| 26-32   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .3  | 4.6  | 7.6   | 4.5   | 1.2   | .1  | 18.4 | .2  | 3.4  | 5.8   | 1.6   | .2    | .1  | 11.2 | 97.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.6 | 5.4  | .6    | .0    | .0    | .0  | 10.5  |         |
| 1-2     | .8  | 17.6 | 5.4   | .0    | .0    | .0  | 23.8  |         |
| 3-4     | .1  | 9.1  | 18.4  | 1.4   | .0    | .0  | 29.0  |         |
| 5-6     | .1  | 2.0  | 11.8  | 2.2   | .0    | .0  | 16.1  |         |
| 7       | .0  | .3   | 5.4   | 3.8   | .0    | .0  | 9.4   |         |
| 8-9     | .0  | .0   | 1.2   | 2.6   | .7    | .1  | 4.6   |         |
| 10-11   | .0  | .0   | .4    | 2.8   | .4    | .0  | 3.6   |         |
| 12      | .0  | .1   | .4    | .8    | .0    | .0  | 1.3   |         |
| 13-16   | .0  | .0   | .1    | .4    | .2    | .0  | .7    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .4    | .1  | .5    |         |
| 23-25   | .0  | .0   | .0    | .1    | .3    | .0  | .4    |         |
| 26-32   | .0  | .0   | .0    | .0    | .1    | .0  | .1    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.6 | 34.5 | 43.6  | 14.0  | 2.1   | .2  | 100.0 | 1006    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.5 | 7.9  | 12.5 | 6.1  | 2.1  | 1.0 | .3    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 658   | 3        |
| 6-7          | *   | .8   | 5.6  | 10.4 | 4.8  | 2.5 | 1.2   | .6  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 535   | 6        |
| 8-9          | *   | .2   | 1.3  | 3.7  | 4.1  | 2.8 | 1.2   | .7  | .8    | .0    | *     | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 308   | 7        |
| 10-11        | .0  | .6   | .4   | 1.3  | 1.1  | 1.4 | 1.0   | .7  | .9    | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 158   | 8        |
| 12-13        | .0  | .0   | .4   | .4   | .3   | .4  | .5    | .4  | .3    | .0    | .0    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 61    | 9        |
| >13          | .0  | .0   | .0   | .2   | .2   | .1  | .2    | .1  | .1    | .1    | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 30    | 11       |
| MEAN         | 2.7 | 2.1  | 2.2  | 1.6  | 2.2  | .9  | .1    | .1  | .3    | *     | .0    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0  | 251   | 4        |
| TOTAL        | 107 | 235  | 451  | 476  | 300  | 187 | 94    | 61  | 60    | 9     | 9     | 6     | 5     | 1     | 0     | 0     | 0     | 0     | 0   | 2001  | 5        |
| PCT          | 5.3 | 11.7 | 22.5 | 23.8 | 15.0 | 9.3 | 4.7   | 3.0 | 3.0   | .4    | .4    | .3    | .2    | *     | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1855-1973

MAY

AREA 0001 AZORES  
38.1N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FQG WD PCPN | FQG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | 1.0  | 1.8       | 1.5  | .0        | .0   | .0              | .0   | 4.1             | 1.7            | .2                      | .7          | .0                  | .4         | .0                   | 92.9       |
| NE                 | .9   | .9        | .9   | .0        | .0   | .0              | .0   | 2.6             | 1.2            | .0                      | 1.3         | .0                  | .6         | .0                   | 94.2       |
| E                  | .8   | .0        | 1.8  | .0        | .0   | .0              | .0   | 2.1             | 1.7            | .0                      | 1.0         | .0                  | 2.6        | .0                   | 92.6       |
| SE                 | 3.5  | 1.6       | .4   | .0        | .0   | .0              | .0   | 5.5             | 2.7            | .0                      | .4          | .0                  | 1.0        | .0                   | 90.4       |
| S                  | 1.7  | 1.9       | 2.8  | .0        | .0   | .0              | .0   | 6.2             | 5.1            | .3                      | 1.5         | .0                  | 1.5        | .0                   | 85.4       |
| SW                 | 1.5  | 2.1       | 1.6  | .0        | .0   | .0              | .0   | 5.2             | 4.6            | .1                      | 1.3         | .0                  | 2.2        | .0                   | 86.6       |
| W                  | 1.4  | 1.2       | 2.7  | .0        | .0   | .0              | .0   | 5.3             | 4.2            | .1                      | .8          | .0                  | 1.1        | .0                   | 88.5       |
| NW                 | 1.6  | 2.7       | 2.1  | .0        | .0   | .0              | .0   | 6.5             | 4.5            | .3                      | .5          | .0                  | .1         | .0                   | 88.3       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | 1.2       | 1.2  | .0        | .0   | .0              | .0   | 2.4             | 1.2            | 1.2                     | .0          | .0                  | 2.4        | .0                   | 92.7       |
| TOT PCT            | 1.4  | 1.6       | 1.9  | .0        | .0   | .0              | .0   | 4.9             | 3.5            | .2                      | 1.0         | .0                  | 1.2        | .0                   | 89.3       |
| TOT DBS:           | 2822 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                        |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FQG WD<br>PCPN | FQG WD<br>PCPN PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003         | 1.4                | 1.4          | 2.3  | .0           | .0   | .0                    | .0   | 4.9                     | 4.0               | .3           | .7             | .0                     | 1.7           | .0                              | 88.4             |
| 06009         | 2.0                | 1.9          | 3.0  | .0           | .0   | .0                    | .0   | 6.7                     | 4.3               | .1           | 1.7            | .0                     | .7            | .0                              | 86.5             |
| 12015         | 1.2                | 1.5          | 1.2  | .0           | .0   | .0                    | .0   | 3.9                     | 3.0               | .0           | 1.1            | .0                     | .8            | .0                              | 91.3             |
| 18021         | 1.1                | 1.6          | 1.2  | .0           | .0   | .0                    | .0   | 4.0                     | 2.9               | .3           | 1.0            | .0                     | 1.6           | .0                              | 90.3             |
| TOT PCT       | 1.4                | 1.6          | 1.9  | .0           | .0   | .0                    | .0   | 4.8                     | 3.5               | .2           | 1.1            | .0                     | 1.2           | .0                              | 89.2             |
| TOT OBS:      | 2870               |              |      |              |      |                       |      |                         |                   |              |                |                        |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00   |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.1                | 5.6  | 5.0   | .9    | *     | .0  |      | 12.6         | 11.5        | 11.8        | 11.6       | 11.9  | 12.2  | 13.6  | 14.8  | 12.5  | 13.3  |
| NE       | .7                 | 4.2  | 3.9   | .8    | .1    | .0  |      | 9.9          | 12.1        | 8.4         | 9.8        | 8.7   | 13.4  | 8.4   | 12.7  | 10.4  | 13.4  |
| E        | 1.0                | 3.6  | 2.6   | .2    | *     | .0  |      | 7.5          | 9.9         | 8.7         | 9.1        | 8.4   | 7.2   | 7.4   | 6.6   | 6.0   | 6.0   |
| SE       | .4                 | 2.7  | 1.8   | .3    | *     | .0  |      | 5.3          | 10.4        | 6.2         | 3.9        | 4.9   | 4.8   | 4.4   | 7.4   | 5.2   | 6.0   |
| S        | .6                 | 4.8  | 5.4   | .9    | .1    | .0  |      | 11.8         | 12.7        | 12.4        | 8.4        | 12.0  | 9.3   | 12.4  | 10.0  | 13.2  | 11.1  |
| SW       | 1.0                | 6.4  | 6.8   | 1.6   | .1    | .0  |      | 15.9         | 12.5        | 17.5        | 13.5       | 13.9  | 13.2  | 18.3  | 14.9  | 16.0  | 16.9  |
| W        | 1.0                | 7.3  | 8.0   | 2.0   | .1    | .0  |      | 18.4         | 12.9        | 17.1        | 19.9       | 20.1  | 17.2  | 19.5  | 15.4  | 18.8  | 14.5  |
| NW       | 1.2                | 6.3  | 6.5   | 1.5   | .1    | .0  |      | 15.5         | 12.4        | 14.8        | 20.7       | 15.7  | 19.8  | 13.4  | 16.0  | 14.6  | 16.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.2                |      |       |       |       |     |      | 3.2          | .0          | 3.0         | 3.2        | 4.4   | 3.0   | 2.7   | 2.2   | 3.2   | 2.4   |
| TOT OBS  | 405                | 1635 | 1608  | 330   | 30    | 0   | 4008 |              | 11.7        | 665         | 220        | 823   | 234   | 678   | 272   | 863   | 253   |
| TOT PCT  | 10.1               | 40.8 | 40.1  | 8.2   | .7    | .0  |      | 100.0        |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |       | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |  |
|----------|------|--------------------|-------|-------|-------|------|-----------|----------|----------|------------|-------|-------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00 03 |      |           |          |          | 06 09      | 12 15 | 18 21 |  |
| N        | 3.3  | 6.4                | 2.7   | .2    | .0    |      | 12.6      | 11.5     | 11.8     | 12.0       | 13.9  | 12.7  |  |
| NE       | 2.5  | 5.1                | 1.8   | .4    | *     |      | 9.9       | 12.1     | 8.7      | 9.7        | 9.7   | 11.1  |  |
| E        | 2.6  | 3.8                | 1.0   | .1    | .0    |      | 7.5       | 9.9      | 8.8      | 8.1        | 7.2   | 6.0   |  |
| SE       | 1.6  | 2.9                | .7    | *     | .0    |      | 5.3       | 10.4     | 5.6      | 4.9        | 5.2   | 5.4   |  |
| S        | 2.1  | 6.9                | 2.9   | .4    | .0    |      | 11.8      | 12.7     | 11.4     | 11.4       | 11.7  | 12.7  |  |
| SW       | 3.5  | 8.3                | 3.6   | .5    | *     |      | 15.9      | 12.5     | 16.5     | 13.7       | 17.3  | 16.2  |  |
| W        | 3.8  | 9.3                | 4.8   | .5    | .1    |      | 18.4      | 12.9     | 17.8     | 19.5       | 18.3  | 17.9  |  |
| NW       | 3.4  | 7.8                | 3.9   | .5    | .0    |      | 15.5      | 12.4     | 16.3     | 16.6       | 14.1  | 15.0  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0    |      | .0        | .0       | .0       | .0         | .0    | .0    |  |
| CALM     | 3.2  |                    |       |       |       |      | 3.2       | .0       | 3.1      | 4.1        | 2.5   | 3.0   |  |
| TOT OBS  | 1042 | 2019               | 838   | 105   | 4     | 4008 |           | 11.7     | 885      | 1037       | 950   | 1116  |  |
| TOT PCT  | 26.0 | 50.4               | 20.9  | 2.6   | .1    |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |  |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1855-1973

MAY

TABLE 4

AREA 0001 AZORES  
38.1N 26.7W

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS)<br>11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-----------------------------|-------|-------|-----|-------|----------|-----------|
| 00603 | 3.1  | 7.0 | 39.8 | 41.2                        | 7.9   | 1.0   | .0  | 11.9  | 100.0    | 885       |
| 06609 | 4.1  | 8.1 | 40.4 | 38.0                        | 8.8   | .6    | .0  | 11.4  | 100.0    | 1057      |
| 12615 | 2.5  | 6.1 | 40.9 | 41.9                        | 7.7   | .8    | .0  | 11.9  | 100.0    | 950       |
| 18621 | 3.0  | 6.4 | 41.8 | 39.7                        | 8.4   | .6    | .0  | 11.7  | 100.0    | 1116      |
| TOT   | 128  | 277 | 1635 | 1608                        | 330   | 30    | 0   | 11.7  |          | 4008      |
| PCT   | 3.2  | 6.9 | 40.8 | 40.1                        | 8.2   | .7    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 2.2  | 2.9  | 4.2  | 3.0          |              | 5.1                    |
| NE       | 1.7  | 1.6  | 3.3  | 2.1          |              | 5.2                    |
| E        | 1.6  | .8   | 2.3  | 2.8          |              | 5.5                    |
| SE       | .9   | .7   | 1.9  | 1.2          |              | 5.2                    |
| S        | 2.3  | 2.0  | 4.4  | 4.1          |              | 5.3                    |
| SW       | 4.0  | 2.9  | 5.3  | 5.2          |              | 5.1                    |
| W        | 4.3  | 3.5  | 6.5  | 5.3          |              | 5.1                    |
| NW       | 2.3  | 3.5  | 5.3  | 3.2          |              | 5.0                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.3  | .3   | .7   | .7           |              | 4.0                    |
| TOT OBS  | 481  | 429  | 795  | 648          | 2353         | 5.1                    |
| TOT PCT  | 20.4 | 18.2 | 33.8 | 27.5         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| PERCENTAGE OF NH $\leq 5/8$ BY WIND DIRECTION |            |            |            |              |              |              |              |              |       |                          |              |
|---|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------------|--------------|
| 000<br>149                                    | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH $\leq 5/8$<br>ANY HGT | TOTAL<br>OBS |
| .1  | .1         | .2         | 1.5        | 2.1          | 1.2          | .2           | .2           | .1           | .0    | 6.6                      |              |
| .1  | .1         | .2         | .8         | 1.6          | 1.1          | .4           | .4           | .1           | .1    | 4.4                      |              |
| .0  | .0         | .7         | 1.8        | .9           | .5           | .1           | .1           | .1           | .1    | 3.2                      |              |
| .0  | .1         | .4         | 1.0        | .3           | .2           | .1           | .0           | .1           | .1    | 2.5                      |              |
| .2  | .5         | 1.2        | 2.1        | .8           | .3           | .3           | .1           | .1           | .1    | 7.2                      |              |
| .1  | .0         | .5         | 1.8        | 2.8          | 1.1          | .4           | .2           | .1           | .2    | 10.0                     |              |
| .1  | .1         | .5         | 2.1        | 4.0          | 1.2          | .5           | .4           | .1           | .1    | 10.4                     |              |
| .1  | .3         | 1.3        | 2.5        | 1.3          | .5           | .1           | .1           | .1           | .1    | 8.0                      |              |
| .0  | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                       |              |
| .0  | .1         | .1         | .4         | .3           | .0           | .1           | .1           | .1           | .1    | 2.0                      |              |
| .7  | 10         | 55         | 236        | 426          | 194          | 71           | 32           | 11           | 22    | 1279                     |              |
| .4  | 2.3        | 10.0       | 18.1       | 8.2          | 3.0          | 1.4          | .5           | .9           | 54.4  | 100.0                    |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.0       | 1.3  | 1.3  | 1.3  | 1.3  | 1.3  | 1.3   | 1.3  |
| >5000             | 1.8       | 2.7  | 2.7  | 2.7  | 2.7  | 2.7  | 2.7   | 2.7  |
| >3500             | 4.3       | 5.5  | 5.7  | 5.7  | 5.7  | 5.7  | 5.7   | 5.7  |
| >2000             | 11.3      | 13.6 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0  | 14.0 |
| >1000             | 23.7      | 31.4 | 32.0 | 32.0 | 32.1 | 32.1 | 32.1  | 32.1 |
| >600              | 33.1      | 40.8 | 41.7 | 41.9 | 42.0 | 42.1 | 42.1  | 42.1 |
| >300              | 34.2      | 42.8 | 43.9 | 44.2 | 44.3 | 44.3 | 44.4  | 44.4 |
| >150              | 34.4      | 43.1 | 44.4 | 44.6 | 44.7 | 44.7 | 44.8  | 44.8 |
| >0                | 34.6      | 43.5 | 44.8 | 45.2 | 45.4 | 45.4 | 45.5  | 45.5 |
| TOTAL             | 824       | 1035 | 1067 | 1076 | 1080 | 1081 | 1083  | 1083 |

TOTAL NUMBER OF OBS: 2380

PCT FREQ NH <5/8: 54.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|-----|-----|------|-------|--------------|
| 8.8 | 10.7 | 13.5 | 11.0 | 10.5 | 8.0 | 9.3 | 9.4 | 18.5 | .4    | 2524         |



PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1855-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0  | .0  | .0  | *    | *    | .0   | .0   | .0  | *    | .1    |              |
|              | TOT %  | .0   | .0  | .0  | .0  | *    | *    | .0   | .0   | .0  | *    | .1    |              |
| 1/2<1        | PCP    | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .1  | .1  | .0  | .0   | *    | .1   | .0   | .0  | .0   | .5    |              |
|              | TOT %  | .1   | .1  | .1  | .0  | .0   | *    | .1   | .0   | .0  | .0   | .5    |              |
| 1<2          | PCP    | .0   | .0  | .0  | *   | *    | *    | .0   | .1   | .0  | .0   | .2    |              |
|              | NO PCP | .0   | .0  | .0  | .0  | *    | *    | .1   | .1   | .0  | .0   | .2    |              |
|              | TOT %  | .0   | .0  | .0  | *   | .1   | .1   | .1   | .1   | .0  | .0   | .4    |              |
| 2<5          | PCP    | .1   | .0  | .0  | *   | .2   | .2   | .2   | .1   | .0  | .0   | .6    |              |
|              | NO PCP | .1   | .1  | .0  | *   | .3   | .3   | .2   | .2   | .0  | .0   | 1.2   |              |
|              | TOT %  | .1   | .1  | .0  | .1  | .5   | .5   | .3   | .3   | .0  | .0   | 1.8   |              |
| 5<10         | PCP    | .3   | .2  | .1  | .1  | .5   | .4   | .7   | .5   | .0  | *    | 2.8   |              |
|              | NO PCP | 1.8  | 1.6 | 1.2 | .8  | 2.0  | 2.8  | 3.0  | 1.8  | .0  | .3   | 15.3  |              |
|              | TOT %  | 2.1  | 1.7 | 1.3 | .9  | 2.5  | 3.2  | 3.7  | 2.3  | .0  | .4   | 18.1  |              |
| 10+          | PCP    | .1   | .1  | .1  | .1  | .1   | .3   | .1   | .3   | .0  | *    | 1.2   |              |
|              | NO PCP | 9.7  | 7.4 | 6.0 | 3.4 | 10.0 | 12.7 | 14.8 | 11.5 | .0  | 2.5  | 77.9  |              |
|              | TOT %  | 9.9  | 7.4 | 6.1 | 3.5 | 10.1 | 12.9 | 14.9 | 11.8 | .0  | 2.5  | 79.1  |              |
| TOT OBS      |        | 12.2 | 9.4 | 7.5 | 4.5 | 13.2 | 16.8 | 19.1 | 14.5 | .0  | 2.9  | 100.0 | 2821         |
| TOT PCT      |        |      |     |     |     |      |      |      |      |     |      |       |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | *    | *     |              |
|              | 4-10       | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0  | .0  | .0  | *    | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0  | .0  | .0  | *    | *    | .0   | .0   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | *    | *   | .0  | .0  | .0   | .0   | .1   | .0   | .0  | .0   | .2    |              |
|              | 11-21      | .0   | .1  | .1  | .0  | .0   | *    | *    | .0   | .0  | .0   | .2    |              |
|              | 22+        | .1   | *   | .0  | .0  | .0   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .1  | .1  | .0  | .0   | *    | .1   | .0   | .0  | .0   | .4    |              |
| 1<2          | 0-3        | .0   | .0  | .0  | .0  | *    | .0   | .0   | *    | .0  | .0   | .1    |              |
|              | 4-10       | .0   | .0  | .0  | *   | *    | .1   | .1   | .1   | .0  | .0   | .2    |              |
|              | 11-21      | .0   | *   | .0  | .0  | *    | *    | .1   | *    | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0  | .0  | *   | .0   | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0   | *   | .0  | *   | .1   | .1   | .1   | .2   | .0  | .0   | .6    |              |
| 2<5          | 0-3        | *    | *   | *   | *   | .0   | .0   | *    | .0   | .0  | .1   | .2    |              |
|              | 4-10       | .2   | *   | .0  | *   | .1   | .1   | .1   | .1   | .0  | .0   | .7    |              |
|              | 11-21      | *    | .0  | .0  | .1  | .2   | .3   | .2   | .2   | .0  | .0   | 1.1   |              |
|              | 22+        | *    | *   | .0  | *   | .1   | .1   | .1   | .0   | .0  | .0   | .4    |              |
|              | TOT %      | .3   | .1  | *   | .1  | .4   | .6   | .4   | .4   | .0  | .1   | 2.3   |              |
| 5<10         | 0-3        | .1   | .1  | .2  | .1  | .1   | .1   | .2   | *    | .0  | .4   | 1.3   |              |
|              | 4-10       | .9   | .7  | .6  | .3  | .7   | .9   | .9   | .9   | .0  | .0   | 6.0   |              |
|              | 11-21      | .8   | .6  | .5  | .4  | 1.2  | 1.6  | 2.2  | 1.1  | .0  | .0   | 8.5   |              |
|              | 22+        | .2   | .3  | .1  | .1  | .5   | .7   | .5   | .6   | .0  | .0   | 3.1   |              |
|              | TOT %      | 2.0  | 1.8 | 1.4 | .9  | 2.6  | 3.4  | 3.8  | 2.6  | .0  | .4   | 18.9  |              |
| 10+          | 0-3        | .8   | .7  | .8  | .2  | .5   | .8   | .7   | .8   | .0  | 2.6  | 7.7   |              |
|              | 4-10       | 4.1  | 3.0 | 2.8 | 2.1 | 4.0  | 5.3  | 6.1  | 4.3  | .0  | .0   | 32.2  |              |
|              | 11-21      | 4.4  | 3.1 | 2.0 | 1.3 | 4.3  | 5.3  | 6.4  | 5.5  | .0  | .0   | 32.3  |              |
|              | 22+        | .8   | .5  | .2  | .2  | .6   | .8   | 1.4  | 1.1  | .0  | .0   | 5.4   |              |
|              | TOT %      | 10.0 | 7.3 | 5.8 | 3.8 | 9.4  | 12.4 | 14.6 | 11.9 | .0  | 2.6  | 77.7  |              |
| TOT OBS      |            | 12.4 | 9.3 | 7.3 | 4.9 | 12.5 | 16.5 | 19.0 | 15.0 | .0  | 3.1  | 100.0 | 3241         |
| TOT PCT      |            |      |     |     |     |      |      |      |      |     |      |       |              |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1855-1973

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38.1N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL        | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|--------------------|---------------|
| 00003          | .9         | .3         | 1.4        | 7.9        | 16.8         | 7.2          | 3.3          | 1.6          | .3           | 1.2      | 40.8         | 59.2               | 573           |
| 06009          | .7         | .5         | 1.9        | 12.4       | 20.6         | 9.5          | 2.7          | 2.4          | .3           | 1.5      | 52.6         | 47.4               | 582           |
| 12015          | .7         | .4         | 2.4        | 10.6       | 17.9         | 9.3          | 3.4          | .7           | .7           | .3       | 46.6         | 53.4               | 670           |
| 18021          | .5         | .3         | 3.1        | 7.8        | 15.0         | 6.6          | 2.2          | .8           | .3           | .6       | 37.2         | 62.8               | 639           |
| TOT<br>PCT     | 17<br>.7   | 10<br>.4   | 55<br>2.2  | 238<br>9.7 | 432<br>17.5  | 200<br>8.1   | 72<br>2.9    | 93<br>1.3    | 11<br>.4     | 22<br>.9 | 1090<br>44.2 | 1374<br>55.8       | 2464<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1    | 1<2      | 2<5       | 5<10        | 10+          | TOTAL<br>OBS  |
|----------------|---------|----------|----------|-----------|-------------|--------------|---------------|
| 00003          | .1      | .3       | .5       | 2.5       | 20.7        | 75.9         | 773           |
| 06009          | .1      | .7       | .6       | 2.9       | 20.4        | 75.2         | 823           |
| 12015          | .0      | .4       | .6       | 1.7       | 16.0        | 81.3         | 829           |
| 18021          | .1      | .3       | .5       | 2.5       | 18.5        | 78.0         | 865           |
| TOT<br>PCT     | 3<br>.1 | 14<br>.4 | 18<br>.5 | 79<br>2.4 | 621<br>18.9 | 2555<br>77.7 | 3290<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>ANDS+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|--------------|------------|-------------|----------------|-------------------|---------------|
| 00003          | .9           | 2.9        | 11.7        | 31.0           | 57.2              | 545           |
| 06009          | .7           | 3.4        | 17.0        | 36.5           | 46.5              | 564           |
| 12015          | .8           | 3.8        | 15.2        | 32.6           | 52.2              | 650           |
| 18021          | .5           | 4.0        | 12.7        | 25.9           | 61.4              | 621           |
| TOT<br>PCT     | 17<br>.7     | 85<br>3.6  | 338<br>14.2 | 748<br>31.4    | 1294<br>54.4      | 2380<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | *     | .1    | .1    | *     | .0     | 6            | .3          |
| 70/74  | .0   | .0    | .0    | .3    | .7    | 1.0   | .9    | .2     | 75           | 3.2         |
| 65/69  | .0   | .0    | .1    | 1.1   | 3.2   | 7.0   | 10.4  | 6.4    | 671          | 28.2        |
| 60/64  | .0   | .0    | .1    | 1.7   | 9.2   | 14.7  | 18.4  | 13.0   | 1360         | 57.2        |
| 55/59  | .0   | .0    | .0    | .4    | 2.2   | 3.5   | 3.2   | 1.7    | 259          | 10.9        |
| 50/54  | .0   | .0    | .0    | .0    | *     | *     | .1    | *      | 5            | .2          |
| TOTAL  | 0    | 0     | 6     | 85    | 368   | 625   | 783   | 509    | 2376         | 100.0       |
| PCT    | .0   | .0    | .3    | 3.6   | 15.5  | 26.3  | 33.0  | 21.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM |
|-------|------|-----|-----|-----|------|------|------|------|-----|------|
| 75/79 | .0   | .1  | .0  | .0  | *    | .0   | .0   | .1   | .0  | *    |
| 70/74 | .3   | .3  | .2  | .1  | .7   | .7   | .4   | .0   | .1  | .1   |
| 65/69 | 2.3  | 2.0 | 1.4 | 1.6 | 5.2  | 6.9  | 5.8  | 2.2  | .0  | .8   |
| 60/64 | 7.2  | 6.1 | 4.8 | 2.4 | 6.7  | 8.7  | 11.0 | 8.4  | .0  | 1.9  |
| 55/59 | 2.6  | .9  | .4  | .3  | .4   | .9   | 1.6  | 3.4  | .0  | .4   |
| 50/54 | *    | .1  | .0  | .0  | *    | *    | *    | .1   | .0  | .0   |
| TOTAL | 12.4 | 9.5 | 6.8 | 4.4 | 12.8 | 17.2 | 19.1 | 14.6 | .0  | 3.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 75  | 68  | 66  | 62  | 58 | 56 | 54  | 62.2 | 887          |
| 06009          | 79  | 69  | 66  | 62  | 58 | 56 | 52  | 62.0 | 1053         |
| 12015          | 77  | 74  | 70  | 64  | 60 | 58 | 54  | 64.6 | 943          |
| 18021          | 78  | 74  | 70  | 64  | 59 | 57 | 53  | 64.5 | 1093         |
| TOT            | 79  | 72  | 69  | 63  | 58 | 57 | 52  | 63.3 | 3976         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.4   | 12.2  | 25.7  | 34.5  | 26.2   | 82   | 591          |
| 06009         | .0   | 1.9   | 13.8  | 24.5  | 32.6  | 27.2   | 82   | 580          |
| 12015         | .0   | 6.1   | 18.2  | 27.2  | 30.5  | 17.9   | 78   | 636          |
| 18021         | .0   | 6.0   | 17.5  | 27.8  | 33.9  | 14.7   | 78   | 604          |
| TOT           | 0    | 94    | 374   | 635   | 792   | 516    | 80   | 2411         |

PERIOD: (PRIMARY) 1928-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .1       | *        |          | 3     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .2       | .0       |          | 8     | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .1       | .4       | .3       | .0       |          | 21    | .0       | .8        |
| 7/8                | .0       | .0       | .0       | .1       | .6       | .9       | *        |          | 48    | .0       | 1.8       |
| 6                  | .0       | .0       | .0       | *        | .9       | .5       | .0       |          | 38    | .0       | 1.5       |
| 5                  | .0       | .0       | .0       | .3       | 1.8      | .8       | *        |          | 77    | *        | 2.9       |
| 4                  | .0       | .0       | .0       | 1.2      | 3.0      | .5       | *        |          | 122   | .1       | 4.6       |
| 3                  | .0       | .0       | .1       | 2.3      | 4.2      | .5       | .0       |          | 184   | .1       | 7.0       |
| 2                  | .0       | .0       | .2       | 4.9      | 5.3      | .3       | *        |          | 280   | .1       | 10.7      |
| 1                  | .0       | .0       | .3       | 6.4      | 4.2      | .2       | .0       |          | 287   | .2       | 10.8      |
| 0                  | .0       | .0       | 1.8      | 12.8     | 3.0      | .2       | .0       |          | 465   | .2       | 17.6      |
| -1                 | .0       | .0       | 2.3      | 8.7      | 1.4      | .1       | .0       |          | 324   | .2       | 12.3      |
| -2                 | .0       | .1       | 4.1      | 6.0      | .8       | *        | .0       |          | 290   | .1       | 11.0      |
| -3                 | .0       | .1       | 4.0      | 3.2      | .3       | .0       | .0       |          | 198   | .1       | 7.5       |
| -4                 | .0       | .3       | 2.8      | 1.8      | .2       | .0       | .0       |          | 132   | .0       | 5.1       |
| -5                 | .0       | .1       | 1.6      | .7       | .2       | .0       | .0       |          | 64    | .0       | 2.5       |
| -6                 | .0       | *        | .8       | .2       | .0       | .0       | .0       |          | 26    | .0       | 1.0       |
| -7/-8              | *        | .2       | .4       | .3       | *        | .0       | .0       |          | 25    | .0       | 1.0       |
| -9/-10             | .0       | *        | .2       | .1       | .0       | .0       | .0       |          | 8     | .0       | .3        |
| -11/-13            | .0       | .0       | .0       | .1       | .0       | .0       | .0       |          | 2     | .0       | .1        |
| TOTAL              | 1        | 23       | 482      | 1276     | 675      | 118      | 25       | 2        | 2602  | 30       | 2572      |
| PCT                | *        | .9       | 18.5     | 49.0     | 25.9     | 4.5      | 1.0      | .1       | 100.0 | 1.2      | 98.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | .7   | .1    | .0    | .0    | .0  | 1.2  | .5  | 1.2  | .0    | .0    | .0    | .0  | 1.7 |
| 1-2     | .0  | 1.2  | 1.2   | .0    | .0    | .0  | 2.4  | .0  | 1.9  | .5    | .0    | .0    | .0  | 2.4 |
| 3-4     | .1  | .5   | 1.5   | .0    | .0    | .0  | 2.0  | .0  | .5   | .7    | .0    | .0    | .0  | 1.2 |
| 5-6     | .0  | .2   | 1.5   | .2    | .0    | .0  | 1.9  | .0  | .1   | .8    | .3    | .0    | .0  | 1.2 |
| 7       | .0  | .1   | 1.1   | .8    | .0    | .0  | 2.0  | .0  | .0   | .2    | .6    | .0    | .0  | .7  |
| 8-9     | .0  | .1   | .3    | .4    | .1    | .0  | .8   | .0  | .0   | .0    | .1    | .1    | .0  | .3  |
| 10-11   | .0  | .0   | .3    | .1    | .0    | .0  | .3   | .0  | .0   | .0    | .0    | .1    | .0  | .1  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 2.8  | 6.0   | 1.5   | .1    | .0  | 10.8 | .5  | 3.6  | 2.2   | 1.2   | .2    | .0  | 7.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .8   | .0    | .0    | .0    | .0  | .9  | .2  | .3   | .1    | .0    | .0    | .0  | .5  |
| 1-2     | .1  | 1.9  | .2    | .0    | .0    | .0  | 2.1 | *   | 1.2  | .2    | .0    | .0    | .0  | 1.4 |
| 3-4     | .2  | .3   | .6    | .0    | .0    | .0  | 1.1 | .0  | .2   | .8    | .1    | .0    | .0  | 1.1 |
| 5-6     | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .3   | .3    | .0    | .0    | .0  | .6  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 3.0  | .9    | .2    | .0    | .0  | 4.4 | .2  | 2.0  | 1.3   | .2    | .0    | .0  | 3.8 |



PERIOD: (OVER-ALL) 1963-1973

MAY  
TABLE 18 (CONT)AREA 0001 AZORES  
38.1N 26.7W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .5   | .0    | .0    | .0    | .0  | .7   | .4  | 1.2  | .4    | .0    | .0    | .0  | 2.1  |
| 1-2     | .1  | 3.0  | 1.3   | .0    | .0    | .0  | 4.4  | .3  | 4.3  | 1.1   | .0    | .0    | .0  | 5.7  |
| 3-4     | .0  | 1.8  | 3.0   | .4    | .0    | .0  | 5.2  | .0  | 2.0  | 4.0   | .6    | .0    | .0  | 6.6  |
| 5-6     | .0  | .6   | 2.4   | .3    | .1    | .0  | 3.4  | .0  | .2   | 2.9   | .2    | *     | .0  | 3.2  |
| 7       | .0  | .0   | .8    | .2    | .0    | .0  | 1.1  | .0  | .0   | .7    | .4    | .0    | .0  | 1.1  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .2   | .0  | .0   | .3    | .1    | .0    | .0  | .4   |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | *     | .0    | .0    | .0  | *    |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 5.8  | 7.7   | 1.1   | .1    | .0  | 15.1 | .7  | 7.8  | 9.3   | 1.3   | *     | .0  | 19.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .6  | 1.3  | .2    | .0    | .0    | .0  | 2.1  | .7  | .9   | .1    | .0    | .0    | .0  | 1.7  |           |
| 1-2     | .1  | 3.6  | 1.6   | .0    | .0    | .0  | 5.3  | .1  | 2.6  | 1.6   | .0    | .0    | .0  | 4.2  |           |
| 3-4     | .0  | 2.1  | 3.5   | .2    | .0    | .0  | 5.8  | .0  | 1.7  | 2.0   | .1    | .0    | .0  | 3.8  |           |
| 5-6     | .0  | .5   | 2.9   | .6    | .0    | .0  | 4.0  | .0  | .5   | 2.4   | .5    | .0    | .0  | 3.5  |           |
| 7       | .0  | .0   | 1.0   | .4    | .0    | .0  | 1.4  | .0  | .1   | 1.1   | .6    | .1    | .0  | 1.8  |           |
| 8-9     | .0  | .0   | .3    | .2    | .0    | .0  | .4   | .0  | *    | .3    | .4    | .0    | .0  | .8   |           |
| 10-11   | .0  | .0   | .2    | .0    | .1    | .0  | .3   | .0  | .0   | .2    | .1    | .0    | .0  | .3   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .6  | 7.5  | 9.7   | 1.5   | .1    | .0  | 19.4 | .8  | 5.8  | 7.7   | 1.7   | .2    | .0  | 16.2 | 96.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.3 | 6.8  | .9    | .0    | .0    | .0  | 15.0  |         |
| 1-2     | .8  | 19.5 | 7.6   | .0    | .0    | .0  | 27.9  |         |
| 3-4     | .3  | 9.0  | 16.0  | 1.4   | .0    | .0  | 26.6  |         |
| 5-6     | .0  | 2.4  | 13.1  | 2.1   | .1    | .0  | 17.6  |         |
| 7       | .0  | .3   | 4.8   | 2.9   | .1    | .0  | 8.0   |         |
| 8-9     | .0  | .1   | 1.3   | 1.4   | .2    | .0  | 3.0   |         |
| 10-11   | .0  | .0   | .7    | .3    | .2    | .0  | 1.2   |         |
| 12      | .0  | .0   | .0    | .3    | .0    | .0  | .3    |         |
| 13-16   | .0  | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 17-19   | .0  | .0   | .0    | .1    | .1    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.4 | 38.0 | 44.4  | 8.6   | .6    | .0  | 100.0 | 1106    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 8.5 | 13.8 | 6.1  | 1.6  | .8   | .1  | .1    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 689   | 3        |
| 6-7          | 1.5 | 5.6  | 9.6  | 5.5  | 1.8  | 1.4 | .2    | .4  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 539   | 6        |
| 8-9          | *   | .4   | 1.7  | 4.1  | 3.8  | 2.2 | 1.5   | .3  | .2    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 295   | 6        |
| 10-11        | .0  | .4   | .8   | 1.5  | 1.5  | 1.1 | .7    | .8  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 146   | 7        |
| 12-13        | .0  | .0   | .2   | .7   | .3   | .3  | .4    | .1  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 51    | 8        |
| >13          | .0  | .0   | .0   | .3   | .1   | .3  | .1    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 25    | 8        |
| INDET        | 4.0 | 2.5  | 3.0  | 2.2  | 1.5  | 1.3 | .5    | .1  | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 314   | 4        |
| TOTAL        | 132 | 273  | 520  | 506  | 294  | 160 | 97    | 38  | 32    | 6     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2059  | 5        |
| PCT          | 6.4 | 13.3 | 25.3 | 24.6 | 14.3 | 7.8 | 4.7   | 1.8 | 1.6   | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1930-1973  
(OVER-ALL) 1863-1973

JUNE

AREA 0001 AZORES  
38.1N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                     |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|---------------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG |
| N        | .4                 | .7        | 1.8  | .0        | .0   | .0              | .0   | 2.8                     | 3.5            | .3        | 1.6         | .0                  | 1.2        | .0                  |
| NE       | 2.0                | .0        | .8   | .0        | .0   | .0              | .0   | 2.7                     | 2.9            | .0        | .3          | .0                  | 2.5        | .0                  |
| E        | .2                 | .7        | .7   | .0        | .0   | .0              | .0   | 1.3                     | 2.4            | .0        | 1.0         | .0                  | 1.2        | .0                  |
| SE       | 1.0                | 1.6       | 2.4  | .0        | .0   | .0              | .0   | 4.9                     | 2.0            | .0        | .2          | .0                  | .0         | .0                  |
| S        | 2.2                | 1.7       | 1.3  | .0        | .0   | .0              | .0   | 4.8                     | 3.3            | .0        | 2.0         | .3                  | 2.7        | .0                  |
| SW       | 2.3                | .3        | 3.2  | .0        | .0   | .0              | .0   | 5.6                     | 4.2            | .0        | 1.6         | .1                  | 2.5        | .0                  |
| W        | 2.0                | .7        | 3.0  | .0        | .0   | .0              | .0   | 5.4                     | 3.9            | .0        | 2.4         | .0                  | 3.1        | .2                  |
| NW       | 1.2                | .8        | 2.5  | .0        | .0   | .0              | .0   | 4.4                     | 3.0            | .0        | 2.8         | .3                  | 2.1        | .0                  |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                  |
| CALM     | .0                 | .0        | 3.5  | .0        | .0   | .0              | .0   | 3.5                     | .9             | .0        | 2.6         | .9                  | 2.6        | .0                  |
| TOT PCT  | 1.4                | .7        | 2.2  | .0        | .0   | .0              | .0   | 4.1                     | 3.2            | *         | 1.7         | .1                  | 2.2        | *                   |
| TOT OBS: | 2691               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                     |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                     |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|---------------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG |
| 00003      | 1.2                | .5        | 2.3  | .0        | .0   | .0              | .2   | 4.1                     | 2.9            | .0        | 1.4         | .0                  | 2.1        | .0                  |
| 06009      | 1.9                | .4        | 3.4  | .0        | .0   | .0              | .0   | 5.2                     | 4.2            | .1        | 1.2         | .3                  | 1.7        | .0                  |
| 12015      | 1.0                | .9        | 1.8  | .0        | .0   | .0              | .0   | 3.5                     | 3.7            | .0        | 2.5         | .1                  | 3.1        | .1                  |
| 18021      | 1.5                | 1.0       | 1.3  | .0        | .0   | .0              | .0   | 3.6                     | 2.2            | .0        | 2.0         | .0                  | 1.5        | .0                  |
| TOT PCT    | 1.4                | .7        | 2.2  | .0        | .0   | .0              | *    | 4.1                     | 3.2            | *         | 1.8         | .1                  | 2.1        | *                   |
| TOT OBS:   | 2742               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                     |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.4                | 7.4  | 3.8   | .7    | .0    | .0  |      | 13.3      | 9.9      |          | 16.1       | 12.7  | 13.6  | 12.1  | 12.2  | 10.4  | 12.7  | 15.3  |
| NE       | 1.1                | 6.7  | 3.9   | .4    | .1    | .0  |      | 12.3      | 10.1     |          | 12.2       | 11.5  | 12.1  | 10.7  | 10.7  | 11.5  | 14.6  | 12.1  |
| E        | 1.0                | 4.9  | 2.1   | .1    | .1    | .0  |      | 8.2       | 8.6      |          | 8.2        | 6.7   | 7.8   | 7.6   | 9.7   | 8.9   | 8.1   | 7.2   |
| SE       | .7                 | 3.2  | 1.1   | .1    | .0    | .0  |      | 5.1       | 8.3      |          | 4.7        | 5.7   | 4.9   | 5.5   | 5.0   | 5.6   | 4.6   | 7.0   |
| S        | .6                 | 4.5  | 3.1   | .4    | *     | .0  |      | 8.6       | 10.9     |          | 9.7        | 6.5   | 7.8   | 6.1   | 9.9   | 9.1   | 9.1   | 6.7   |
| SW       | 1.0                | 6.4  | 6.1   | 1.0   | .1    | .0  |      | 14.5      | 11.8     |          | 11.9       | 16.5  | 15.6  | 16.3  | 17.0  | 14.8  | 13.0  | 12.7  |
| W        | 1.5                | 8.4  | 7.1   | .9    | .1    | .0  |      | 18.0      | 11.0     |          | 17.6       | 21.8  | 17.8  | 18.8  | 17.4  | 18.6  | 17.9  | 16.3  |
| NW       | 1.0                | 7.7  | 5.0   | .8    | .1    | .0  |      | 14.6      | 10.7     |          | 13.8       | 12.8  | 14.0  | 12.1  | 15.7  | 16.1  | 14.6  | 18.1  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 5.5                |      |       |       |       |     |      | 5.5       | .0       |          | 5.8        | 5.9   | 6.5   | 10.9  | 2.4   | 5.1   | 5.4   | 4.7   |
| TOT OBS  | 525                | 1870 | 1223  | 170   | 17    | 0   | 3805 |           | 9.9      |          | 626        | 203   | 818   | 230   | 627   | 257   | 831   | 213   |
| TOT PCT  | 13.8               | 49.1 | 32.1  | 4.5   | .4    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |      |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|------|--|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |      |  |           |          |          | 00         | 06    | 12    | 18    |
| N        | 4.4                | 7.0  | 1.8   | .1    | .0  |      |  | 13.3      | 9.9      |          | 15.3       | 13.2  | 11.7  | 13.2  |
| NE       | 4.0                | 6.8  | 1.2   | .3    | .0  |      |  | 12.3      | 10.1     |          | 12.0       | 11.8  | 10.9  | 14.1  |
| E        | 3.6                | 4.0  | .5    | .1    | .0  |      |  | 8.2       | 8.6      |          | 7.8        | 7.7   | 9.5   | 7.9   |
| SE       | 2.2                | 2.6  | .3    | *     | .0  |      |  | 5.1       | 8.3      |          | 4.9        | 5.0   | 5.2   | 5.1   |
| S        | 2.2                | 5.2  | 1.1   | .1    | .0  |      |  | 8.6       | 10.9     |          | 9.0        | 7.4   | 9.7   | 8.6   |
| SW       | 3.2                | 8.2  | 2.9   | .3    | .0  |      |  | 14.5      | 11.8     |          | 13.0       | 15.8  | 16.4  | 12.9  |
| W        | 4.9                | 10.0 | 2.8   | .3    | .0  |      |  | 18.0      | 11.0     |          | 18.6       | 18.0  | 17.8  | 17.6  |
| NW       | 4.2                | 8.1  | 2.0   | .2    | .0  |      |  | 14.6      | 10.7     |          | 13.6       | 13.6  | 15.8  | 15.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      |  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | 5.5                |      |       |       |     |      |  | 5.5       | .0       |          | 5.8        | 7.4   | 3.2   | 5.3   |
| TOT OBS  | 1299               | 1975 | 478   | 53    | 0   | 3805 |  |           | 9.9      |          | 829        | 1048  | 884   | 1044  |
| TOT PCT  | 34.1               | 51.9 | 12.6  | 1.4   | .0  |      |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1930-1973  
(OVER-ALL) 1863-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 0000 | 5.8  | 8.9 | 48.7 | 31.6               | 4.5   | .5    | .0  | 9.9   | 100.0    | 829       |
| 0600 | 7.4  | 8.9 | 51.7 | 27.7               | 3.9   | .4    | .0  | 9.2   | 100.0    | 1048      |
| 1200 | 3.2  | 7.2 | 50.7 | 33.3               | 5.0   | .7    | .0  | 10.4  | 100.0    | 884       |
| 1800 | 5.3  | 8.1 | 45.6 | 36.1               | 4.6   | .3    | .0  | 10.1  | 100.0    | 1044      |
| TOT  | 209  | 316 | 1870 | 1223               | 170   | 17    | 0   | 9.9   |          | 3805      |
| PCT  | 5.5  | 8.3 | 49.1 | 32.1               | 4.5   | .4    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 2.8  | 2.8  | 4.3  | 3.9          |              | 5.1                    |
| NE       | 2.3  | 2.7  | 5.2  | 3.5          |              | 5.2                    |
| E        | 1.6  | 1.3  | 3.6  | 2.4          |              | 5.3                    |
| SE       | 1.6  | .7   | 1.2  | 1.1          |              | 4.6                    |
| S        | 2.7  | 1.8  | 2.4  | 2.6          |              | 4.7                    |
| SW       | 2.8  | 2.5  | 4.6  | 3.7          |              | 5.2                    |
| W        | 4.5  | 3.2  | 5.2  | 4.8          |              | 4.8                    |
| NW       | 3.2  | 2.3  | 4.5  | 4.1          |              | 5.1                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.6  | .9   | .9   | .7           |              | 3.9                    |
| TOT OBS  | 538  | 425  | 740  | 626          | 2329         | 5.0                    |
| TOT PCT  | 23.1 | 18.2 | 31.8 | 26.9         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| BY WIND DIRECTION |      |      |      |       |       | AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION |     |     |     |      |      |      |      |      |      |       |         |       |
|-------------------|------|------|------|-------|-------|---|-----|-----|-----|------|------|------|------|------|------|-------|---------|-------|
| WIND DIR          | 0-2  | 3-4  | 5-7  | 8-6   | TOTAL | MEAN  | 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|                   |      |      |      | OBSCD | OBS   | CLOUD                                       |     |     |     |      |      |      |      |      |      |       | ANY HGT | OBS   |
|                   |      |      |      |       |       | COVER                                       | 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       |         |       |
| N                 | 2.8  | 2.8  | 4.3  | 3.9   |       | 5.1   | .1  | *   | .4  | 1.8  | 2.4  | 1.3  | .5   | .1   | .1   | .0    | 7.0     |       |
| NE                | 2.3  | 2.7  | 5.2  | 3.5   |       | 5.2   | .1  | .1  | .3  | 1.6  | 2.8  | 1.3  | .5   | .1   | .0   | *     | 6.9     |       |
| E                 | 1.6  | 1.3  | 3.6  | 2.4   |       | 5.3   | .1  | .1  | .1  | .9   | 1.8  | 1.0  | .4   | .1   | .0   | .0    | 4.5     |       |
| SE                | 1.6  | .7   | 1.2  | 1.1   |       | 4.6   | .1  | *   | *   | .3   | .9   | .4   | .1   | *    | .0   | .1    | 2.7     |       |
| S                 | 2.7  | 1.8  | 2.4  | 2.6   |       | 4.7   | *   | .1  | .2  | .9   | 1.2  | .7   | .3   | .2   | .0   | .1    | 5.8     |       |
| SW                | 2.8  | 2.5  | 4.6  | 3.7   |       | 5.2   | .2  | .1  | .4  | 1.5  | 2.2  | 1.3  | .5   | .2   | .1   | .1    | 7.2     |       |
| W                 | 4.5  | 3.2  | 5.2  | 4.8   |       | 4.8   | .2  | .1  | .5  | 2.1  | 3.0  | 1.0  | .8   | *    | .1   | .1    | 9.8     |       |
| NW                | 3.2  | 2.3  | 4.5  | 4.1   |       | 5.1   | .1  | .2  | .5  | 1.8  | 2.4  | 1.3  | .6   | .1   | .1   | .1    | 7.0     |       |
| VAR               | .0   | .0   | .0   | .0    |       | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM              | 1.6  | .9   | .9   | .7    |       | 3.9   | .1  | .1  | .0  | .4   | .4   | .1   | .1   | *    | *    | *     | 2.8     |       |
| TOT OBS           | 538  | 425  | 740  | 626   | 2329  | 5.0   | 23  | 18  | 57  | 264  | 397  | 198  | 84   | 20   | 8    | 11    | 1249    | 2329  |
| TOT PCT           | 23.1 | 18.2 | 31.8 | 26.9  | 100.0 |   | 1.0 | .8  | 2.4 | 11.3 | 17.0 | 8.5  | 3.6  | .9   | .3   | .5    | 53.6    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .8        | .8   | .9   | .9   | .9   | .9   | .9    | .9   |
| >5000             | 1.4       | 1.6  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7   | 1.7  |
| >3500             | 4.3       | 5.0  | 5.3  | 5.3  | 5.3  | 5.3  | 5.3   | 5.3  |
| >2000             | 11.1      | 13.4 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8  | 13.8 |
| >1000             | 24.2      | 29.6 | 30.5 | 30.6 | 30.6 | 30.7 | 30.7  | 30.7 |
| >600              | 32.5      | 40.4 | 41.7 | 41.9 | 41.9 | 42.0 | 42.0  | 42.0 |
| >300              | 33.7      | 42.5 | 44.2 | 44.3 | 44.3 | 44.4 | 44.4  | 44.4 |
| >150              | 34.1      | 43.0 | 44.9 | 45.0 | 45.1 | 45.1 | 45.2  | 45.2 |
| >0                | 34.5      | 43.6 | 45.6 | 45.8 | 45.9 | 46.0 | 46.1  | 46.1 |
| TOTAL             | 818       | 1033 | 1081 | 1086 | 1088 | 1089 | 1093  | 1093 |

TOTAL NUMBER OF OBS: 2369

PCT FREQ NH <5/8: 53.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4   | 5   | 6   | 7    | 8    | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|-----|-----|-----|------|------|-------|--------------|
| 8.2 | 11.5 | 13.7 | 11.4 | 8.8 | 7.0 | 8.9 | 10.3 | 19.8 | .3    | 2474         |



PERIOD: (PRIMARY) 1930-1973  
(OVER-ALL) 1863-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .2           |
|              | NO PCP | *    | *    | .1  | .0  | .0  | *    | *    | *    | .0  | *    | *     |              |
|              | TOT %  | *    | *    | .1  | .0  | .0  | *    | *    | *    | .0  | *    | *     |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | *   | .0   | .0   | .0   | .0  | .0   | *     | .4           |
|              | NO PCP | .1   | *    | *   | *   | .1  | .0   | .1   | .1   | .0  | *    | *     |              |
|              | TOT %  | .1   | *    | *   | *   | .1  | .0   | .1   | .1   | .0  | *    | *     |              |
| 1<2          | PCP    | .0   | .0   | .0  | *   | .0  | .0   | *    | .0   | .0  | *    | .1    | .5           |
|              | NO PCP | .0   | *    | *   | .0  | .0  | .1   | .2   | *    | .0  | .1   | .5    |              |
|              | TOT %  | .0   | *    | *   | .0  | .0  | .1   | .2   | *    | .0  | .1   | .6    |              |
| 2<5          | PCP    | .1   | .1   | *   | *   | .1  | .2   | .3   | .1   | .0  | *    | 1.0   | 1.6          |
|              | NO PCP | *    | .0   | .0  | .1  | .2  | .6   | .3   | .4   | .0  | .1   | 1.6   |              |
|              | TOT %  | .1   | .1   | *   | .1  | .4  | .8   | .6   | .4   | .0  | .1   | 2.6   |              |
| 5<10         | PCP    | .2   | .1   | .1  | .1  | .1  | .4   | .5   | .4   | .0  | .1   | 2.0   | 15.1         |
|              | NO PCP | 1.7  | 1.7  | 1.0 | .5  | 1.2 | 3.2  | 3.0  | 2.5  | .0  | .3   | 15.1  |              |
|              | TOT %  | 1.9  | 1.8  | 1.1 | .6  | 1.4 | 3.6  | 3.5  | 2.9  | .0  | .4   | 17.1  |              |
| 10+          | PCP    | .1   | .1   | .0  | .1  | .1  | .2   | .1   | .1   | .0  | .0   | .9    | 78.1         |
|              | NO PCP | 11.6 | 11.1 | 7.1 | 3.9 | 7.2 | 9.6  | 13.2 | 10.8 | .0  | 3.5  | 78.1  |              |
|              | TOT %  | 11.7 | 11.2 | 7.1 | 4.0 | 7.4 | 9.8  | 13.4 | 10.9 | .0  | 3.5  | 79.0  |              |
| TOT OBS      |        | 13.8 | 13.1 | 8.4 | 4.7 | 9.2 | 14.3 | 17.8 | 14.4 | .0  | 4.2  | 100.0 | 2687         |
| TOT PCT      |        |      |      |     |     |     |      |      |      |     |      |       |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | .0  | .0  | .0  | .0   | .0   | .0   | .0  | *    | .1    | .1           |
|              | 4-10       | .0   | *    | *   | .0  | .0  | .0   | .0   | *    | *   | .0   | .1    |              |
|              | 11-21      | .0   | .0   | *   | .0  | .0  | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .1  | .0  | .0  | *    | *    | *    | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | *    | *     | .2           |
|              | 4-10       | .0   | *    | *   | *   | *   | .0   | .1   | *    | .0  | .0   | .2    |              |
|              | 11-21      | *    | .0   | .0  | .0  | *   | .0   | .0   | *    | .0  | .0   | .1    |              |
|              | 22+        | *    | .0   | .0  | .0  | .1  | .0   | .0   | *    | .0  | .0   | .1    |              |
|              | TOT %      | .1   | *    | *   | *   | .1  | .0   | .1   | .1   | .0  | *    | .4    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | *    | .0   | .0   | .0  | .1   | .1    | .4           |
|              | 4-10       | .0   | *    | .0  | .0  | .0  | *    | *    | *    | .0  | .0   | .1    |              |
|              | 11-21      | .1   | *    | .1  | .0  | .0  | .1   | .1   | .0   | .0  | .0   | .4    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .1   | *    | *    | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .1   | .1  | *   | .0  | .1   | .2   | *    | .0  | .1   | .7    |              |
| 2<5          | 0-3        | .0   | .0   | .1  | .0  | .0  | .0   | .1   | .1   | .0  | .2   | .4    | 1.3          |
|              | 4-10       | .1   | .1   | .1  | .1  | .1  | .2   | .2   | .2   | .0  | .0   | 1.1   |              |
|              | 11-21      | *    | *    | *   | *   | .2  | .6   | .3   | .2   | .0  | .0   | 1.3   |              |
|              | 22+        | .1   | .0   | .0  | .0  | .1  | .1   | .1   | .0   | .0  | .0   | .4    |              |
|              | TOT %      | .2   | .1   | .1  | .1  | .3  | .9   | .7   | .4   | .0  | .2   | 3.1   |              |
| 5<10         | 0-3        | .2   | .2   | .1  | .2  | *   | .2   | *    | .2   | .0  | .5   | 1.5   | 7.2          |
|              | 4-10       | .9   | .7   | .7  | .3  | .5  | 1.4  | 1.3  | 1.4  | .0  | .0   | 7.2   |              |
|              | 11-21      | .7   | .7   | .3  | .2  | .7  | 1.6  | 1.8  | 1.1  | .0  | .0   | 7.1   |              |
|              | 22+        | .1   | .1   | .0  | *   | .2  | .5   | .4   | .3   | .0  | .0   | 1.6   |              |
|              | TOT %      | 1.8  | 1.6  | 1.0 | .7  | 1.5 | 3.7  | 3.5  | 3.0  | .0  | .5   | 17.4  |              |
| 10+          | 0-3        | 1.1  | 1.0  | .9  | .7  | .5  | .8   | 1.2  | .7   | .0  | 3.8  | 10.6  | 40.3         |
|              | 4-10       | 6.3  | 5.7  | 4.2 | 2.9 | 4.0 | 4.4  | 6.5  | 6.2  | .0  | .0   | 40.3  |              |
|              | 11-21      | 3.2  | 3.3  | 1.8 | .7  | 2.4 | 4.2  | 5.0  | 3.8  | .0  | .0   | 24.4  |              |
|              | 22+        | .5   | .4   | .1  | .1  | .2  | .4   | .6   | .6   | .0  | .0   | 2.8   |              |
|              | TOT %      | 11.2 | 10.5 | 7.0 | 4.3 | 7.0 | 9.8  | 13.3 | 11.2 | .0  | 3.8  | 78.1  |              |
| TOT OBS      |            | 13.4 | 12.3 | 8.3 | 5.2 | 9.0 | 14.6 | 17.8 | 14.8 | .0  | 4.6  | 100.0 | 3114         |
| TOT PCT      |            |      |      |     |     |     |      |      |      |     |      |       |              |

PERIOD: (PRIMARY) 1930-1973  
(OVER-ALL) 1863-1973

JUNE

AREA 0001 AZORES  
38.1N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1499 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | 1.4        | .5         | 1.7        | 9.2        | 13.2         | 9.2          | 2.8          | .5           | .0           | 1.0   | 39.7  | 60.3               | 575          |
| 06009         | .7         | .8         | 3.5        | 16.1       | 20.6         | 7.1          | 3.0          | 1.2          | .5           | .5    | 53.9  | 46.1               | 607          |
| 12015         | 1.1        | 1.3        | 1.8        | 9.7        | 19.0         | 8.2          | 4.1          | 1.1          | .3           | .5    | 47.2  | 52.8               | 610          |
| 18021         | .6         | .5         | 2.4        | 9.2        | 13.2         | 8.9          | 4.3          | .5           | .5           | .2    | 40.1  | 59.9               | 631          |
| TOT           | 23         | 19         | 57         | 268        | 400          | 202          | 86           | 20           | 8            | 13    | 1096  | 1327               | 2423         |
| PCT           | .9         | .8         | 2.4        | 11.1       | 16.5         | 8.3          | 3.5          | .8           | .3           | .5    | 45.2  | 54.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .4    | .7  | 2.3 | 16.9 | 79.6 | 739          |
| 06009         | .4   | .2    | .7  | 3.9 | 18.9 | 75.8 | 814          |
| 12015         | .3   | .7    | 1.0 | 3.1 | 16.0 | 78.9 | 768          |
| 18021         | .1   | .5    | .5  | 3.2 | 17.3 | 78.5 | 845          |
| TOT           | 7    | 14    | 23  | 100 | 548  | 2474 | 3166         |
| PCT           | .2   | .4    | .7  | 3.2 | 17.3 | 78.1 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | 1.4           | 3.8        | 14.3        | 26.8            | 58.9              | 559          |
| 06009         | .7            | 5.0        | 22.6        | 32.3            | 45.1              | 597          |
| 12015         | 1.2           | 4.3        | 16.0        | 32.2            | 51.8              | 600          |
| 18021         | .7            | 3.8        | 14.5        | 27.1            | 58.4              | 613          |
| TOT           | 23            | 100        | 400         | 702             | 1267              | 2369         |
| PCT           | 1.0           | 4.2        | 16.9        | 29.6            | 53.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | *     | .1    | *     | *     | .0    | .0     | 6            | .3          |
| 75/79  | .0   | .0    | .1    | .5    | .7    | 1.1   | .8    | .2     | 80           | 3.4         |
| 70/74  | .0   | .0    | *     | .6    | 2.5   | 5.8   | 6.4   | 4.1    | 454          | 19.5        |
| 65/69  | .0   | .0    | .0    | .6    | 4.5   | 11.8  | 17.2  | 16.3   | 1174         | 50.5        |
| 60/64  | .0   | .0    | .0    | .3    | 4.0   | 6.5   | 7.5   | 6.9    | 587          | 25.2        |
| 55/59  | .0   | .0    | .0    | .0    | *     | .3    | .4    | .3     | 25           | 1.1         |
| TOTAL  | 0    | 0     | 5     | 51    | 275   | 595   | 754   | 644    | 2326         | 100.0       |
| PCT    | .0   | .0    | .2    | 2.2   | 11.8  | 25.6  | 32.4  | 27.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM |
|------|------|-----|-----|-----|------|------|------|-----|------|
| .1   | .0   | .0  | .0  | .0  | *    | *    | *    | .0  | *    |
| .2   | .3   | .3  | .1  | .6  | .5   | .5   | .6   | .0  | .3   |
| 1.4  | 2.0  | 1.8 | 1.1 | 2.4 | 4.2  | 3.9  | 2.0  | .0  | .8   |
| 5.7  | 7.5  | 4.2 | 2.4 | 4.7 | 7.4  | 9.5  | 6.5  | .0  | 2.5  |
| 3.4  | 3.6  | 1.5 | .7  | 1.8 | 2.4  | 4.2  | 5.1  | .0  | .6   |
| .5   | .1   | .0  | *   | .1  | .1   | .1   | .2   | .0  | .0   |
| 13.4 | 13.5 | 7.9 | 4.3 | 9.5 | 14.7 | 18.2 | 14.3 | .0  | 4.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 73  | 71  | 66  | 61 | 59 | 57  | 65.8 | 837          |
| 06009         | 81  | 73  | 70  | 65  | 61 | 59 | 56  | 65.5 | 1041         |
| 12015         | 82  | 78  | 74  | 68  | 63 | 60 | 57  | 68.3 | 859          |
| 18021         | 81  | 78  | 75  | 68  | 63 | 61 | 58  | 68.3 | 1025         |
| TOT           | 82  | 77  | 73  | 67  | 62 | 59 | 56  | 67.0 | 3762         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.4   | 10.2  | 21.1  | 33.7  | 33.6   | 83   | 569          |
| 06009         | .0   | .5    | 5.8   | 22.8  | 34.5  | 36.5   | 84   | 606          |
| 12015         | .0   | 4.3   | 17.0  | 29.0  | 28.4  | 21.3   | 79   | 582          |
| 18021         | .0   | 3.4   | 15.8  | 28.5  | 32.9  | 19.4   | 79   | 614          |
| TOT           | 0    | 57    | 289   | 602   | 768   | 655    | 81   | 2371         |

PERIOD: (PRIMARY) 1930-1973  
(OVER-ALL) 1863-1973

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38.1N 26.7W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | .0       | 1     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .1       | .1       | .4       | .0       | 14    | *        | .5        |
| 9/10               | .0       | .0       | *        | .3       | .6       | .2       | *        | 30    | .0       | 1.2       |
| 7/8                | .0       | .0       | .2       | 1.0      | 1.1      | .1       | .0       | 57    | .0       | 2.4       |
| 6                  | .0       | .0       | .2       | 1.1      | .7       | .1       | .0       | 51    | .1       | 2.0       |
| 5                  | .0       | .2       | .7       | 1.6      | 1.0      | *        | .0       | 86    | *        | 3.5       |
| 4                  | *        | .3       | 1.2      | 3.2      | 1.0      | *        | .0       | 138   | .1       | 5.6       |
| 3                  | .0       | .4       | 2.6      | 3.2      | .2       | .0       | .0       | 153   | .2       | 6.1       |
| 2                  | .0       | 1.1      | 4.9      | 4.5      | .2       | .0       | .0       | 258   | .3       | 10.4      |
| 1                  | .1       | 2.2      | 6.5      | 3.1      | .2       | .0       | .0       | 291   | .3       | 11.8      |
| 0                  | .2       | 4.3      | 9.0      | 2.5      | *        | .0       | .0       | 387   | .5       | 15.6      |
| -1                 | .3       | 4.3      | 6.3      | 1.7      | .1       | *        | .0       | 306   | .1       | 12.6      |
| -2                 | .5       | 4.9      | 4.9      | .5       | *        | .0       | .0       | 260   | .1       | 10.7      |
| -3                 | .4       | 3.2      | 2.5      | .3       | .1       | .0       | .0       | 154   | *        | 6.3       |
| -4                 | .4       | 2.1      | 1.5      | .3       | .0       | .0       | .0       | 103   | .1       | 4.1       |
| -5                 | .2       | 1.2      | 1.1      | .2       | .0       | .0       | .0       | 65    | .0       | 2.7       |
| -6                 | .2       | .5       | .2       | .0       | *        | .0       | .0       | 25    | .0       | 1.0       |
| -7/-8              | .1       | .3       | .3       | .1       | .0       | .0       | .0       | 21    | .0       | .9        |
| -9/-10             | .0       | .2       | .1       | *        | .0       | .0       | .0       | 10    | .0       | .4        |
| TOTAL              | 59       |          | 1021     |          | 130      |          | 2        | 2411  | 46       | 2365      |
| PCT                | 2.4      | 25.2     | 42.3     | 23.6     | 5.4      | 1.0      | .1       | 100.0 | 1.9      | 98.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE   |       |       |       |     |    |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 1-3  |     | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |      |     |
| <1      | .3  | 1.4  | .0    | .0    | .0    | .0  | 1.7  |     | 1.1  | 1.4   | *     | .0    | .0  | .0 | 2.5  |     |
| 1-2     | .1  | 4.1  | 1.3   | .0    | .0    | .0  | 5.5  |     | .1   | 3.4   | .9    | .0    | .0  | .0 | 4.4  |     |
| 3-4     | .0  | 2.1  | 1.9   | .1    | .0    | .0  | 4.1  |     | .2   | 2.5   | 2.0   | .1    | .0  | .0 | 4.9  |     |
| 5-6     | .0  | .4   | 1.8   | .3    | .0    | .0  | 2.5  |     | .0   | .0    | 1.1   | .1    | .0  | .0 | 1.3  |     |
| 7       | .0  | .0   | 1.0   | .2    | .0    | .0  | 1.1  |     | .0   | .1    | .4    | .4    | .1  | .0 | 1.0  |     |
| 8-9     | .0  | .0   | .0    | .4    | .0    | .0  | .4   |     | .0   | .0    | .4    | .1    | .0  | .0 | .5   |     |
| 10-11   | .0  | .0   | .1    | .4    | .0    | .0  | .5   |     | .0   | .0    | .0    | .1    | .0  | .0 | .1   |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .1    | .0  | .0 | .1   |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0   | .0    | .0    | .0    | .0  | .0 | .0   |     |
| TOT PCT | .4  | 8.1  | 6.0   | 1.4   | .0    | .0  | 15.9 |     | 1.5  | 7.4   | 4.9   | 1.0   | .1  | .0 | 14.8 |     |

| HGT     | E   |      |       |       |       |     |     | PCT | SE   |       |       |       |     |    |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 1-3 |     | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |     |
| <1      | .7  | .7   | .1    | .0    | .0    | .0  | 1.5 |     | .4   | .7    | .0    | .0    | .0  | .0 | 1.1 |     |
| 1-2     | .1  | 2.9  | .3    | .0    | .0    | .0  | 3.2 |     | .2   | 1.5   | .2    | .0    | .0  | .0 | 1.9 |     |
| 3-4     | .1  | .7   | .8    | .1    | .0    | .0  | 1.7 |     | .1   | .3    | .4    | .0    | .0  | .0 | .8  |     |
| 5-6     | .1  | .2   | .2    | .0    | .0    | .0  | .5  |     | .0   | .1    | .1    | .2    | .0  | .0 | .4  |     |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 8-9     | .0  | .1   | .1    | .0    | .0    | .0  | .2  |     | .0   | *     | .0    | .0    | .0  | *  | .0  |     |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0   | .0    | .0    | .0    | .0  | .0 | .0  |     |
| TOT PCT | .9  | 4.6  | 1.7   | .1    | .0    | .0  | 7.2 |     | .7   | 2.6   | .7    | .2    | .0  | .0 | 4.3 |     |



PERIOD: (OVER-ALL) 1963-1973

JUNE  
TABLE 18 (CONT)AREA 0001 AZORES  
38.1N 26.7W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .1  | .3   | .0    | .0    | .0    | .0  | .5   |
| 1-2     | .1  | 3.2  | .9    | .0    | .0    | .0  | 4.1 | .1  | 2.1  | 1.2   | .0    | .0    | .0  | 3.3  |
| 3-4     | .0  | .6   | 1.2   | .1    | .0    | .0  | 1.9 | .1  | 1.6  | 1.8   | .2    | .0    | .0  | 3.7  |
| 5-6     | .0  | .1   | 1.0   | .2    | .0    | .0  | 1.3 | .0  | *    | 2.3   | .3    | .0    | .0  | 2.7  |
| 7       | .0  | .0   | .1    | .1    | .0    | .0  | .1  | .0  | .0   | 1.0   | .9    | .0    | .0  | 1.8  |
| 8-9     | .0  | .1   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .2    | .4    | .0    | .0  | .7   |
| 10-11   | .0  | .0   | .0    | .1    | .1    | .0  | .2  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .1  | 4.4  | 3.3   | .5    | .1    | .0  | 8.3 | .3  | 4.0  | 6.5   | 2.0   | .0    | .0  | 12.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .6  | 1.5  | .0    | .0    | .0    | .0  | 2.1  | .4  | 1.1  | .0    | .0    | .0    | .0  | 1.5  |           |
| 1-2     | .0  | 3.8  | 1.2   | .0    | .0    | .0  | 5.0  | .1  | 4.5  | 1.5   | .0    | .0    | .0  | 6.1  |           |
| 3-4     | .2  | 1.9  | 2.3   | .0    | .0    | .0  | 4.4  | .1  | 1.7  | 2.5   | *     | .0    | .0  | 4.3  |           |
| 5-6     | .1  | .5   | 1.9   | .2    | .0    | .0  | 2.7  | *   | .3   | 1.8   | .3    | .0    | .0  | 2.4  |           |
| 7       | .0  | .2   | .9    | .9    | .2    | .0  | 2.2  | .0  | .0   | .6    | .6    | .0    | .0  | 1.3  |           |
| 8-9     | .0  | .0   | .7    | .1    | .0    | .0  | .9   | .0  | .0   | *     | .3    | .0    | .0  | .4   |           |
| 10-11   | .0  | .0   | .0    | .1    | .1    | .0  | .2   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .9  | 7.9  | 7.0   | 1.4   | .3    | .0  | 17.5 | .7  | 7.5  | 6.5   | 1.3   | .1    | .0  | 16.1 | 96.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.9  | 7.4  | .1    | .0    | .0    | .0  | 15.4  |         |
| 1-2     | 1.2  | 25.0 | 7.3   | .0    | .0    | .0  | 33.5  |         |
| 3-4     | .8   | 11.2 | 12.8  | .7    | .0    | .0  | 25.4  |         |
| 5-6     | .2   | 1.6  | 10.1  | 1.6   | .0    | .0  | 13.5  |         |
| 7       | .0   | .3   | 4.1   | 3.0   | .3    | .0  | 7.6   |         |
| 8-9     | .0   | .2   | 1.6   | 1.4   | .0    | .0  | 3.2   |         |
| 10-11   | .0   | .0   | .1    | .8    | .3    | .0  | 1.2   |         |
| 12      | .0   | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 13-16   | .0   | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 10.1 | 45.7 | 36.0  | 7.6   | .6    | .0  | 100.0 | 1034    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1   | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|------|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 5.1  | 15.5 | 15.7 | 6.1  | 2.0  | .5  | .4    | .2 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 902   | 3        |
| 6-7          | .3   | 1.8  | 7.1  | 8.7  | 3.2  | 1.7 | .6    | .1 | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 468   | 5        |
| 8-9          | .0   | .8   | 1.4  | 3.0  | 2.7  | 1.5 | .8    | .2 | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 210   | 6        |
| 10-11        | .0   | .4   | .8   | .8   | 1.0  | .7  | .7    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 88    | 6        |
| 12-13        | .0   | .0   | .6   | .3   | .2   | .1  | .2    | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 28    | 6        |
| >13          | .0   | .0   | .0   | .1   | .1   | .2  | .0    | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12    | 9        |
| INDET        | 4.7  | 3.3  | 2.4  | 1.6  | 1.2  | .4  | .2    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 275   | 3        |
| TOTAL        | 201  | 431  | 552  | 407  | 207  | 101 | 56    | 16 | 11    | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 1983  | 4        |
| PCT          | 10.1 | 21.7 | 27.8 | 20.5 | 10.4 | 5.1 | 2.8   | .8 | .6    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

JULY

AREA 0001 AZORES  
38.1N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                           |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|---------------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST BLWG SNOW | NO SIG WEA |  |
| N                  | 1.3  | 1.1       | 1.4  | .0        | .0   | .0              | .0   | 3.8             | 3.2            | .0                      | .4          | .0                  | .3         | .0                        | 92.4       |  |
| NE                 | .2   | .1        | 2.1  | .0        | .0   | .0              | .0   | 2.4             | 2.7            | .0                      | .0          | .0                  | .2         | .0                        | 94.6       |  |
| E                  | 1.1  | .2        | 1.5  | .0        | .0   | .0              | .0   | 2.8             | 1.0            | .0                      | .0          | .0                  | .3         | .0                        | 95.8       |  |
| SE                 | 1.3  | 1.1       | .4   | .0        | .0   | .0              | .0   | 2.8             | 3.5            | .0                      | .0          | .0                  | 2.2        | .0                        | 91.5       |  |
| S                  | 1.6  | 2.3       | 3.3  | .0        | .0   | .0              | .0   | 6.7             | 2.4            | .5                      | .4          | .0                  | .0         | .0                        | 90.0       |  |
| SW                 | 2.4  | .6        | 3.3  | .0        | .0   | .0              | .0   | 5.9             | 2.9            | .4                      | 1.2         | .0                  | 1.9        | .0                        | 87.7       |  |
| W                  | .6   | .9        | 1.4  | .0        | .0   | .0              | .0   | 2.5             | 1.0            | .0                      | 2.2         | .0                  | 2.0        | .0                        | 92.3       |  |
| NW                 | 1.0  | .8        | 1.8  | .0        | .0   | .0              | .0   | 3.6             | .7             | .0                      | 1.0         | .0                  | 1.0        | .0                        | 93.7       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | .0         |  |
| CALM               | .0   | .0        | .7   | .0        | .0   | .0              | .0   | .7              | 2.0            | .0                      | .0          | .0                  | 2.0        | .0                        | 95.4       |  |
| TOT PCT            | 1.0  | .7        | 1.8  | .0        | .0   | .0              | .0   | 3.4             | 2.1            | .1                      | .6          | .0                  | .9         | .0                        | 92.9       |  |
| TOT OBS:           | 2441 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                           |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                       |                  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------------|------------------|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 0000                | 1.5                | 1.0          | 2.3  | .0           | .0   | .0                    | .0   | 4.6                     | 2.1               | .2           | .5             | .0                        | .3            | .0                                    | 92.3             |
| 0600                | 1.1                | .8           | 2.7  | .0           | .0   | .0                    | .0   | 4.5                     | 3.3               | .2           | .8             | .0                        | 1.3           | .0                                    | 90.0             |
| 1200                | .6                 | .6           | 1.1  | .0           | .0   | .0                    | .0   | 2.2                     | 1.6               | .0           | .6             | .0                        | .9            | .0                                    | 94.7             |
| 1800                | .8                 | .6           | 1.1  | .0           | .0   | .0                    | .0   | 2.5                     | 1.6               | .2           | .5             | .0                        | .9            | .0                                    | 94.4             |
| TOT PCT<br>TOT OBS: | 1.0<br>2525        | .8           | 1.8  | .0           | .0   | .0                    | .0   | 3.4                     | 2.1               | .1           | .6             | .0                        | .9            | .0                                    | 92.9             |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|--|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.5                | 8.8  | 5.0   | .4    | .0    | .0  |  | 15.6      | 9.7      |          | 18.0       | 15.5  | 15.1  | 13.7  | 16.1  | 13.6  | 15.9  | 13.3  |
| NE       | 1.5                | 10.3 | 5.0   | .3    | .0    | .0  |  | 17.1      | 9.2      |          | 17.3       | 15.2  | 16.7  | 19.0  | 17.1  | 18.9  | 17.2  | 16.0  |
| E        | 1.6                | 7.2  | 2.4   | .8    | .0    | .0  |  | 11.2      | 8.1      |          | 11.8       | 8.7   | 10.9  | 9.1   | 13.9  | 8.0   | 11.9  | 8.4   |
| SE       | .8                 | 3.6  | .7    | .1    | .0    | .0  |  | 5.2       | 7.4      |          | 6.2        | 4.9   | 4.2   | 2.6   | 5.4   | 5.8   | 6.2   | 3.9   |
| S        | 1.2                | 4.1  | 1.8   | .1    | .0    | .0  |  | 7.2       | 8.5      |          | 7.6        | 7.5   | 8.7   | 5.0   | 8.2   | 5.6   | 6.8   | 3.1   |
| SW       | 1.3                | 5.5  | 3.2   | .7    | .0    | .0  |  | 10.6      | 10.1     |          | 7.1        | 11.1  | 10.1  | 13.3  | 10.4  | 15.1  | 11.0  | 12.1  |
| W        | 1.6                | 7.6  | 3.1   | .5    | .0    | .0  |  | 12.9      | 9.1      |          | 12.1       | 13.7  | 11.9  | 15.0  | 11.4  | 14.9  | 12.7  | 17.2  |
| NW       | 2.0                | 7.7  | 3.2   | .2    | .0    | .0  |  | 13.2      | 8.6      |          | 10.9       | 16.3  | 14.2  | 14.4  | 11.2  | 14.8  | 12.5  | 16.6  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |  | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 7.1                |      |       |       |       |     |  | 7.1       | .0       |          | 9.0        | 7.2   | 8.1   | 7.8   | 6.3   | 3.4   | 5.8   | 9.4   |
| TOT OBS  | 676                | 2000 | 889   | 86    | 0     | 0   |  | 3651      | 8.3      |          | 581        | 221   | 749   | 231   | 620   | 238   | 778   | 233   |
| TOT PCT  | 18.5               | 54.8 | 24.3  | 2.4   | .0    | .0  |  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 4.8  | 9.1                | 1.6   | .1    | .0       |      | 15.6         | 9.7         | 17.3        | 14.8       | 15.4     | 15.3     |  |
| NE       | 6.2  | 9.6                | 1.3   | .1    | .0       |      | 17.1         | 9.2         | 16.7        | 17.2       | 17.6     | 16.9     |  |
| E        | 4.9  | 5.8                | .5    | *     | .0       |      | 11.2         | 8.1         | 11.0        | 10.5       | 12.2     | 11.1     |  |
| SE       | 2.7  | 2.3                | .2    | .0    | .0       |      | 5.2          | 7.4         | 5.8         | 3.8        | 5.5      | 5.6      |  |
| S        | 3.2  | 3.3                | .6    | .1    | .0       |      | 7.2          | 8.5         | 7.5         | 7.8        | 7.5      | 6.0      |  |
| SW       | 3.2  | 5.9                | 1.3   | .1    | .0       |      | 10.6         | 10.1        | 8.2         | 10.9       | 11.7     | 11.2     |  |
| W        | 5.2  | 6.4                | 1.2   | .1    | .0       |      | 12.9         | 9.1         | 12.6        | 12.7       | 12.4     | 13.7     |  |
| NW       | 5.5  | 6.5                | 1.1   | .1    | .0       |      | 13.2         | 8.6         | 12.4        | 14.3       | 12.2     | 13.5     |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 7.1  |                    |       |       |          |      | 7.1          | .0          | 8.5         | 8.1        | 5.5      | 6.6      |  |
| TOT OBS  | 1560 | 1786               | 286   | 19    | 0        | 3651 |              | 8.3         | 802         | 980        | 858      | 1011     |  |
| TOT PCT  | 42.7 | 48.9               | 7.8   | .5    | .0       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

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38.1N 26.7W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|------|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |      |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00603 | 8.5  | 11.5 | 53.1 | 25.8               | 1.1   | .0    | .0  | 8.2   | 100.0    | 802       |
| 06609 | 8.1  | 13.3 | 55.0 | 21.6               | 2.0   | .0    | .0  | 7.8   | 100.0    | 980       |
| 12615 | 5.5  | 10.6 | 58.0 | 22.8               | 3.0   | .0    | .0  | 8.5   | 100.0    | 858       |
| 18621 | 6.6  | 10.1 | 53.1 | 27.1               | 3.1   | .0    | .0  | 8.8   | 100.0    | 1011      |
| TOT   | 261  | 415  | 2000 | 889                | 86    | 0     | 0   | 8.3   |          | 3651      |
| PCT   | 7.1  | 11.4 | 54.8 | 24.3               | 2.4   | .0    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 4.0  | 4.2  | 5.9  | 2.4          |              | 4.5                    |
| NE       | 4.2  | 4.4  | 5.7  | 3.7          |              | 4.7                    |
| E        | 4.0  | 2.2  | 5.0  | 2.4          |              | 4.6                    |
| SE       | 1.5  | 1.3  | 1.9  | 1.1          |              | 4.5                    |
| S        | 2.4  | 2.3  | 2.4  | 1.3          |              | 4.2                    |
| SW       | 2.9  | 1.7  | 2.2  | 1.9          |              | 4.3                    |
| W        | 3.8  | 2.0  | 3.6  | 1.5          |              | 4.1                    |
| NW       | 3.1  | 2.6  | 4.0  | 1.5          |              | 4.4                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 3.5  | 1.5  | 1.3  | .6           | 2081         | 3.0                    |
| TOT OBS  | 614  | 464  | 664  | 339          | 2081         | 4.3                    |
| TOT PCT  | 29.5 | 22.3 | 31.9 | 16.3         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| .1         | .0         | .3         | 1.4        | 2.5          | 1.2          | .2           | .2           | *            | .0    | 10.6               |              |
| .1         | .1         | .1         | 1.2        | 3.3          | 1.8          | .5           | .3           | .1           | *     | 10.6               |              |
| .0         | .0         | .1         | 1.1        | 2.0          | 1.4          | .5           | .0           | .2           | .0    | 8.3                |              |
| *          | .0         | .1         | .4         | 1.0          | .5           | .2           | *            | *            | *     | 3.5                |              |
| .1         | .0         | .1         | .5         | .8           | .6           | .3           | .1           | .0           | .0    | 5.9                |              |
| *          | .1         | .4         | .8         | 1.0          | .5           | .3           | .1           | .0           | *     | 5.5                |              |
| .1         | .1         | .3         | .9         | 1.4          | .7           | .2           | *            | .0           | .0    | 7.3                |              |
| *          | .0         | .2         | .7         | 1.6          | 1.0          | .5           | .1           | .0           | .0    | 7.1                |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| *          | .0         | *          | .4         | .4           | .2           | .2           | .0           | .0           | .0    | 5.6                |              |
| 10         | 5          | 34         | 153        | 293          | 161          | 58           | 16           | 8            | 3     | 1340               | 2081         |
| .5         | .2         | 1.6        | 7.4        | 14.1         | 7.7          | 2.8          | .8           | .4           | .1    | 64.4               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .5        | .5   | .5   | .5   | .5   | .5   | .5    | .5   |
| >5000             | 1.1       | 1.4  | 1.4  | 1.4  | 1.4  | 1.4  | 1.4   | 1.4  |
| >3500             | 3.7       | 4.2  | 4.2  | 4.2  | 4.2  | 4.2  | 4.2   | 4.2  |
| >2000             | 10.7      | 11.7 | 11.8 | 11.9 | 11.9 | 11.9 | 11.9  | 11.9 |
| >1000             | 22.2      | 25.4 | 25.7 | 25.8 | 25.9 | 25.9 | 25.9  | 25.9 |
| >600              | 27.8      | 32.7 | 33.2 | 33.3 | 33.3 | 33.3 | 33.3  | 33.3 |
| >300              | 28.7      | 34.2 | 34.8 | 34.8 | 34.9 | 34.9 | 34.9  | 34.9 |
| >150              | 28.9      | 34.4 | 35.0 | 35.1 | 35.1 | 35.1 | 35.1  | 35.1 |
| >0                | 29.2      | 34.8 | 35.4 | 35.5 | 35.6 | 35.6 | 35.6  | 35.6 |
| TOTAL             | 624       | 743  | 757  | 759  | 761  | 761  | 761   | 761  |

TOTAL NUMBER OF OBS: 2138

PCT FREQ NH <5/8: 64.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|-----|-----|------|-------|--------------|
| 8.9 | 13.4 | 18.2 | 14.0 | 10.0 | 8.1 | 8.0 | 8.0 | 11.3 | .2    | 2233         |



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38.1N 26.7W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | .0  | *   | .0   | *    | .0  | .0   | .1    |              |
|              | NO PCP | *    | .0   | .0   | .0  | *   | .1  | .2   | *    | .0  | .0   | .4    |              |
|              | TOT %  | *    | .0   | .0   | .0  | *   | .1  | .2   | .1   | .0  | .0   | .5    |              |
| 1<2          | PCP    | .0   | *    | .0   | .0  | .0  | .0  | *    | *    | .0  | .0   | .1    |              |
|              | NO PCP | *    | *    | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %  | *    | .1   | .0   | .0  | .0  | .0  | *    | *    | .0  | .0   | .2    |              |
| 2<5          | PCP    | *    | *    | .0   | *   | .1  | .1  | .0   | .1   | .0  | .0   | .4    |              |
|              | NO PCP | *    | .2   | .0   | .1  | .1  | .1  | .1   | .1   | .0  | .0   | .6    |              |
|              | TOT %  | .1   | .2   | .0   | .1  | .2  | .2  | .1   | .2   | .0  | .0   | 1.0   |              |
| 5<10         | PCP    | .3   | .2   | .2   | .1  | .2  | .3  | .2   | .2   | .0  | .0   | 1.7   |              |
|              | NO PCP | 1.7  | 1.5  | 1.5  | .4  | 1.0 | 1.8 | 1.6  | 2.0  | .0  | .4   | 11.9  |              |
|              | TOT %  | 2.0  | 1.7  | 1.7  | .5  | 1.3 | 2.1 | 1.8  | 2.2  | .0  | .4   | 13.6  |              |
| 10+          | PCP    | .2   | .1   | .1   | .1  | .2  | .1  | .1   | .1   | .0  | .0   | 1.0   |              |
|              | NO PCP | 14.0 | 15.1 | 11.1 | 4.9 | 6.5 | 7.2 | 9.2  | 9.9  | .0  | 5.8  | 83.7  |              |
|              | TOT %  | 14.2 | 15.2 | 11.3 | 5.0 | 6.7 | 7.2 | 9.2  | 10.0 | .0  | 5.8  | 84.7  |              |
| TOT OBS      |        |      |      |      |     |     |     |      |      |     |      |       |              |
| TOT PCT      |        | 16.4 | 17.2 | 13.0 | 5.5 | 8.1 | 9.7 | 11.4 | 12.5 | .0  | 6.2  | 100.0 | 2436         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY    | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|---------|------------|------|------|------|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2    | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|         | 4-10       | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|         | 11-21      | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|         | 22+        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|         | TOT %      | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
| 1/2<1   | 0-3        | .0   | .0   | .0   | .0  | .0  | *    | .0   | .0   | .0  | .0   | *     |              |
|         | 4-10       | .0   | .0   | .0   | .0  | .0  | *    | .1   | .1   | .0  | .0   | .2    |              |
|         | 11-21      | *    | .0   | .0   | .0  | .0  | *    | .1   | *    | .0  | .0   | .2    |              |
|         | 22+        | .0   | .0   | .0   | .0  | .0  | *    | *    | .0   | .0  | .0   | .0    |              |
|         | TOT %      | *    | .0   | .0   | .0  | *   | .1   | .2   | .1   | .0  | .0   | .5    |              |
| 1<2     | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|         | 4-10       | *    | .1   | .0   | .0  | .0  | *    | *    | *    | .0  | .0   | .1    |              |
|         | 11-21      | .0   | .0   | .0   | .0  | .0  | .0   | .1   | *    | .0  | .0   | .1    |              |
|         | 22+        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|         | TOT %      | *    | .1   | .0   | .0  | .0  | *    | .1   | .1   | .0  | .0   | .2    |              |
| 2<5     | 0-3        | .0   | .0   | .0   | *   | .0  | *    | .1   | *    | .0  | *    | .2    |              |
|         | 4-10       | .1   | .1   | .0   | .1  | .1  | .1   | .1   | .1   | .0  | .0   | .5    |              |
|         | 11-21      | .1   | .2   | *    | *   | .1  | .1   | .0   | .1   | .0  | .0   | .6    |              |
|         | 22+        | .0   | .0   | .0   | *   | .0  | *    | *    | .0   | .0  | .0   | .1    |              |
|         | TOT %      | .2   | .2   | *    | .1  | .1  | .2   | .2   | .2   | .0  | *    | 1.4   |              |
| 5<10    | 0-3        | .3   | .2   | .3   | *   | .2  | .1   | .1   | .4   | .0  | .5   | 2.2   |              |
|         | 4-10       | 1.1  | 1.0  | 1.0  | .4  | .6  | 1.0  | 1.4  | 1.0  | .0  | .0   | 7.5   |              |
|         | 11-21      | .6   | .5   | .3   | .1  | .4  | 1.2  | .5   | .5   | .0  | .0   | 4.0   |              |
|         | 22+        | .1   | .1   | *    | *   | .1  | .1   | .1   | *    | .0  | .0   | .5    |              |
|         | TOT %      | 2.1  | 1.9  | 1.5  | .6  | 1.2 | 2.4  | 2.1  | 2.0  | .0  | .5   | 14.2  |              |
| 10+     | 0-3        | 1.1  | 1.2  | 1.3  | .7  | 1.0 | 1.2  | 1.5  | 1.3  | .0  | 6.2  | 15.6  |              |
|         | 4-10       | 7.7  | 8.8  | 6.8  | 3.3 | 3.5 | 3.9  | 6.0  | 6.5  | .0  | .0   | 46.5  |              |
|         | 11-21      | 4.4  | 4.3  | 2.4  | .7  | 1.6 | 2.1  | 2.4  | 2.4  | .0  | .0   | 20.3  |              |
|         | 22+        | .3   | .3   | *    | *   | .1  | .4   | .1   | .1   | .0  | .0   | 1.3   |              |
|         | TOT %      | 13.5 | 14.6 | 10.5 | 4.8 | 6.1 | 7.6  | 10.0 | 10.3 | .0  | 6.2  | 83.7  |              |
| TOT OBS |            |      |      |      |     |     |      |      |      |     |      |       |              |
| TOT PCT |            | 15.8 | 16.7 | 12.0 | 5.5 | 7.5 | 10.3 | 12.6 | 12.7 | .0  | 6.8  | 100.0 | 2936         |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

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38.1N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .4         | .0         | 1.5        | 6.0        | 10.6         | 6.3          | 1.9          | .7           | .4           | .0    | 27.8  | 72.2                | 536          |
| 06009         | .8         | .8         | 2.5        | 9.1        | 14.4         | 8.5          | 4.2          | 1.3          | .0           | .2    | 41.7  | 58.3                | 527          |
| 12015         | .7         | .2         | 1.4        | 7.5        | 14.2         | 7.5          | 3.6          | .2           | .5           | .2    | 36.0  | 64.0                | 583          |
| 18021         | .0         | .0         | .9         | 6.3        | 15.2         | 7.9          | 1.4          | 1.1          | .5           | .2    | 33.5  | 66.5                | 559          |
| TOT           | 10         | 5          | 34         | 159        | 301          | 167          | 61           | 18           | 8            | 3     | 766   | 1439                | 2205         |
| PCT           | .5         | .2         | 1.5        | 7.2        | 13.7         | 7.6          | 2.8          | .8           | .4           | .1    | 34.7  | 65.3                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .3    | .4  | 2.0 | 13.4 | 83.9 | 709          |
| 06009         | .0   | .8    | .5  | 1.5 | 19.1 | 78.1 | 784          |
| 12015         | .0   | .4    | .1  | .8  | 10.3 | 88.4 | 749          |
| 18021         | .0   | .5    | .0  | 1.2 | 13.9 | 84.5 | 779          |
| TOT           | 0    | 15    | 8   | 41  | 430  | 2527 | 3021         |
| PCT           | .0   | .5    | .3  | 1.4 | 14.2 | 83.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .4            | 1.9        | 8.9         | 19.8            | 71.3               | 516          |
| 06009         | .8            | 4.3        | 13.8        | 29.1            | 57.1               | 508          |
| 12015         | .7            | 2.3        | 10.5        | 26.2            | 63.3               | 572          |
| 18021         | .0            | .9         | 7.9         | 26.6            | 65.5               | 542          |
| TOT           | 10            | 50         | 219         | 544             | 1375               | 2138         |
| PCT           | .5            | 2.3        | 10.2        | 25.4            | 64.3               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .0    | .1    | .0    | .0     | 2            | .1          |
| 80/84  | .0   | .0    | .0    | .3    | .7    | .4    | .1    | .1     | 35           | 1.7         |
| 75/79  | .0   | .0    | .1    | .7    | 1.8   | 4.1   | 2.4   | 1.0    | 206          | 10.3        |
| 70/74  | .0   | .0    | .0    | .7    | 6.5   | 14.4  | 16.3  | 11.2   | 985          | 49.1        |
| 65/69  | .0   | .0    | .0    | .5    | 3.2   | 11.8  | 13.3  | 7.7    | 731          | 36.4        |
| 60/64  | .0   | .0    | .0    | .0    | .3    | .7    | .6    | .0     | 48           | 2.4         |
| TOTAL  | 0    | 0     | 2     | 44    | 252   | 635   | 661   | 413    | 2007         | 100.0       |
| PCT    | .0   | .0    | .1    | 2.2   | 12.6  | 31.6  | 32.9  | 20.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM |
|-------|------|------|------|-----|-----|------|------|------|-----|------|
| 85/89 | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   |
| 80/84 | .3   | .1   | .2   | .0  | .2  | .3   | .4   | .1   | .0  | .1   |
| 75/79 | 1.1  | 1.6  | 1.4  | .4  | .9  | 1.6  | 1.2  | 1.3  | .0  | .7   |
| 70/74 | 7.2  | 6.8  | 5.6  | 3.4 | 4.7 | 6.0  | 6.3  | 5.9  | .0  | 3.2  |
| 65/69 | 7.4  | 8.6  | 5.2  | 1.6 | 2.1 | 2.2  | 2.8  | 4.5  | .0  | 2.1  |
| 60/64 | .9   | .9   | .2   | .1  | .0  | .0   | .0   | .3   | .0  | .1   |
| TOTAL | 16.9 | 18.0 | 12.6 | 5.6 | 8.0 | 10.0 | 10.6 | 12.2 | .0  | 6.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 76  | 74  | 70  | 65 | 63 | 61  | 69.5 | 820          |
| 06009         | 82  | 76  | 74  | 69  | 65 | 63 | 62  | 69.3 | 992          |
| 12015         | 86  | 81  | 79  | 72  | 67 | 65 | 63  | 72.2 | 846          |
| 18021         | 86  | 82  | 78  | 72  | 67 | 65 | 63  | 72.3 | 992          |
| TOT           | 86  | 80  | 77  | 71  | 66 | 63 | 61  | 70.9 | 3650         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .6    | 7.4   | 30.1  | 38.7  | 23.2   | 82   | 512          |
| 06009         | .0   | .8    | 4.4   | 26.3  | 39.3  | 29.2   | 83   | 517          |
| 12015         | .0   | 3.8   | 17.5  | 35.4  | 28.5  | 14.8   | 78   | 526          |
| 18021         | .0   | 3.7   | 19.7  | 35.0  | 26.9  | 14.7   | 77   | 517          |
| TOT           | 0    | 46    | 255   | 657   | 690   | 424    | 80   | 2072         |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | .0       | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .2       | .1       | 10    | .0       | .5        |
| 9/10               | .0       | *        | .0       | .0       | .6       | .5       | .0       | 27    | .0       | 1.2       |
| 7/8                | .0       | *        | .1       | .9       | 1.1      | .2       | .0       | 54    | .0       | 2.4       |
| 6                  | .0       | .0       | .0       | 1.0      | .4       | .0       | .0       | 31    | .0       | 1.4       |
| 5                  | .0       | .0       | .5       | 1.6      | .4       | .1       | .0       | 57    | .0       | 2.6       |
| 4                  | .0       | .2       | 1.4      | 2.6      | .5       | .0       | .0       | 103   | .0       | 4.7       |
| 3                  | .0       | .3       | 2.0      | 3.3      | .5       | *        | .0       | 136   | .0       | 6.1       |
| 2                  | *        | .8       | 3.8      | 2.6      | .4       | .0       | .0       | 168   | .0       | 7.6       |
| 1                  | .0       | 1.7      | 5.4      | 2.7      | .2       | .0       | .0       | 221   | .1       | 9.9       |
| 0                  | .2       | 3.2      | 9.5      | 2.5      | .2       | .0       | .0       | 347   | .1       | 15.5      |
| -1                 | .3       | 5.3      | 8.2      | 1.6      | .0       | .0       | .0       | 341   | .0       | 15.4      |
| -2                 | .5       | 6.4      | 6.1      | .8       | .0       | .0       | .0       | 307   | *        | 13.8      |
| -3                 | .3       | 3.5      | 3.3      | .4       | .0       | .0       | .0       | 164   | .0       | 7.4       |
| -4                 | .5       | 3.2      | 1.9      | .2       | .0       | .0       | .0       | 129   | .0       | 5.8       |
| -5                 | .4       | 1.3      | .8       | *        | .0       | .0       | .0       | 55    | .0       | 2.5       |
| -6                 | .2       | .7       | .3       | *        | .0       | .0       | .0       | 27    | .0       | 1.2       |
| -7/-8              | .1       | .4       | .6       | *        | .0       | .0       | .0       | 26    | .0       | 1.2       |
| -9/-10             | *        | .3       | .1       | .0       | .0       | .0       | .0       | 9     | .0       | .4        |
| -11/-13            | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 58       | 602      | 977      | 453      | 97       | 25       | 2        | 2214  | 6        | 2208      |
| PCT                | 2.6      | 27.2     | 44.1     | 20.5     | 4.4      | 1.1      | .1       | 100.0 | .3       | 99.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | N  | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | NE | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|----|-------|-------|-----|------|-----|------|-------|----|-------|-------|-----|------|
| <1      | .9  | 1.5  | .0    | .0 | .0    | .0    | .0  | 2.4  | .4  | 2.1  | .0    | .0 | .0    | .0    | .0  | 2.5  |
| 1-2     | .2  | 6.2  | 1.6   | .0 | .0    | .0    | .0  | 8.0  | .1  | 7.1  | 1.3   | .0 | .0    | .0    | .0  | 8.5  |
| 3-4     | .0  | 2.3  | 1.8   | .2 | .0    | .0    | .0  | 4.3  | .1  | 2.5  | 2.1   | *  | .0    | .0    | .0  | 4.8  |
| 5-6     | .0  | .5   | .9    | .0 | .0    | .0    | .0  | 1.4  | .0  | 1.2  | 1.5   | .1 | .0    | .0    | .0  | 2.9  |
| 7       | .0  | .0   | .4    | .0 | .0    | .0    | .0  | .6   | .0  | .0   | .2    | .0 | .0    | .0    | .0  | .2   |
| 8-9     | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .4   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 10-11   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 10.5 | 5.2   | .2 | .0    | .0    | .0  | 17.0 | .6  | 12.9 | 5.1   | .2 | .0    | .0    | .0  | 18.9 |

| HGT     | 1-3 | 4-10 | 11-21 | E  | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | SE | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|----|-------|-------|-----|------|-----|------|-------|----|-------|-------|-----|-----|
| <1      | 1.1 | 1.6  | .0    | .0 | .0    | .0    | .0  | 2.7  | .2  | .6   | .0    | .0 | .0    | .0    | .0  | .8  |
| 1-2     | .1  | 4.3  | 1.0   | .0 | .0    | .0    | .0  | 5.4  | .2  | 1.5  | .1    | .0 | .0    | .0    | .0  | 1.8 |
| 3-4     | .0  | 1.7  | 1.6   | .0 | .0    | .0    | .0  | 3.3  | .0  | .6   | .4    | .0 | .0    | .0    | .0  | 1.0 |
| 5-6     | .0  | .3   | .8    | .0 | .0    | .0    | .0  | 1.1  | .0  | .2   | .1    | .0 | .0    | .0    | .0  | .2  |
| 7       | .0  | .0   | .3    | .0 | .0    | .0    | .0  | .3   | .0  | .1   | .0    | .0 | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0 | .0    | .0    | .0  | .0  |
| TOT PCT | 1.2 | 8.0  | 3.7   | .0 | .0    | .0    | .0  | 12.9 | .4  | 2.9  | .6    | .0 | .0    | .0    | .0  | 4.0 |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | .8   | .0    | .0    | .0    | .0  | 1.5 | 1.0 | 1.1  | .0    | .0    | .0    | .0  | 2.1  |
| 1-2     | .1  | 2.3  | .6    | .0    | .0    | .0  | 3.0 | .0  | 2.9  | .3    | .0    | .0    | .0  | 3.3  |
| 3-4     | .2  | 1.5  | 1.0   | .0    | .0    | .0  | 2.8 | .1  | 1.2  | 1.6   | .2    | .0    | .0  | 3.1  |
| 5-6     | .0  | .1   | .5    | .0    | .0    | .0  | .6  | .0  | .0   | .5    | .4    | .0    | .0  | .9   |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .3    | .0    | .0    | .0  | .6   |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .4    | .1    | .0    | .0  | .6   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 4.8  | 2.3   | .0    | .0    | .0  | 8.1 | 1.1 | 5.3  | 3.3   | .8    | .0    | .0  | 10.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .6  | 1.4  | .0    | .0    | .0    | .0  | 2.0  | 1.1 | .9   | .0    | .0    | .0    | .0  | .0   | 2.1       |
| 1-2     | .2  | 3.7  | 1.3   | .0    | .0    | .0  | 5.1  | .4  | 3.7  | .2    | .0    | .0    | .0  | .0   | 4.3       |
| 3-4     | .1  | 1.6  | 1.3   | .1    | .0    | .0  | 3.0  | .2  | 1.9  | .6    | .2    | .0    | .0  | .0   | 2.8       |
| 5-6     | .0  | .2   | .1    | .2    | .0    | .0  | .6   | .0  | .1   | .4    | .0    | .0    | .0  | .0   | .6        |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .4   | .0  | .0   | .3    | .0    | .0    | .0  | .0   | .3        |
| 8-9     | .0  | .1   | .2    | .0    | .0    | .0  | .3   | .0  | *    | .0    | .0    | .0    | .0  | *    | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0        |
| TOT PCT | .9  | 6.9  | 3.1   | .4    | .0    | .0  | 11.4 | 1.7 | 6.7  | 1.6   | .2    | .0    | .0  | 10.1 | 92.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 14.0 | 9.9  | .0    | .0    | .0    | .0  | 23.8  |         |
| 1-2     | 2.3  | 31.0 | 6.3   | .0    | .0    | .0  | 39.6  |         |
| 3-4     | .7   | 13.0 | 10.2  | .7    | .0    | .0  | 24.7  |         |
| 5-6     | .0   | 2.6  | 4.7   | .7    | .0    | .0  | 8.1   |         |
| 7       | .0   | .2   | 2.2   | .1    | .0    | .0  | 2.5   |         |
| 8-9     | .0   | .1   | 1.1   | .1    | .0    | .0  | 1.3   |         |
| 10-11   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 12      | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 17.0 | 56.9 | 24.4  | 1.7   | .0    | .0  | 100.0 | 831     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1   | 1-2  | 3-4  | 5-6  | 7   | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|------|------|------|------|-----|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 6.1  | 19.4 | 17.6 | 4.0  | 1.1 | .5  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 839   | 3        |
| 6-7          | .3   | 2.6  | 7.1  | 8.0  | 1.7 | .9  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 359   | 4        |
| 8-9          | .1   | 1.1  | 1.6  | 2.0  | 1.4 | .9  | .1    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 125   | 5        |
| 10-11        | .0   | .3   | 1.2  | 1.0  | .6  | .3  | .2    | .2 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 67    | 5        |
| 12-13        | .0   | .0   | .4   | .2   | .1  | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 13    | 4        |
| >13          | .0   | .0   | .0   | .2   | .2  | .0  | .1    | .1 | .0    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10    | 8        |
| INDET        | 9.0  | 3.5  | 3.0  | 1.8  | .3  | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 306   | 2        |
| TOTAL        | 266  | 463  | 531  | 298  | 93  | 48  | 14    | 5  | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 1719  | 3        |
| PCT          | 15.5 | 26.9 | 30.9 | 17.3 | 5.4 | 2.8 | .8    | .3 | .0    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1930-1970  
(OVER-ALL) 1855-1970

AUGUST

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38.1N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 | OTHER WEATHER PHENOMENA |                 |                |           |             |                     |            |                 | NO SIG WEA |
|----------|--------------------|-----------|------|-----------|------|-----------------|-------------------------|-----------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL                    | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW |            |
| N        | .3                 | .8        | 1.0  | .0        | .0   | .0              | .0                      | 2.2             | 2.2            | .0        | 1.0         | .0                  | .2         | .0              | 94.4       |
| NE       | .6                 | 1.0       | .8   | .0        | .0   | .0              | .0                      | 2.5             | 2.0            | .3        | .6          | .0                  | .6         | .0              | 94.0       |
| E        | .2                 | .4        | 2.5  | .0        | .0   | .0              | .0                      | 3.1             | 4.9            | .4        | .4          | .0                  | .4         | .4              | 90.5       |
| SE       | 1.5                | .0        | 1.9  | .0        | .0   | .0              | .0                      | 2.8             | 5.7            | .0        | 1.0         | .0                  | .7         | .0              | 89.8       |
| S        | 2.2                | 1.2       | .8   | .0        | .0   | .0              | .0                      | 4.3             | 1.6            | .0        | .0          | .0                  | 2.9        | .0              | 91.2       |
| SW       | 2.1                | 1.4       | 2.0  | .0        | .0   | .0              | .0                      | 5.5             | 4.0            | .3        | .0          | .0                  | 1.7        | .0              | 88.5       |
| W        | 1.8                | .8        | .6   | .0        | .0   | .0              | .0                      | 3.0             | 4.3            | .0        | .5          | .0                  | 2.8        | .0              | 89.5       |
| NW       | .9                 | 1.5       | 1.2  | .0        | .0   | .0              | .0                      | 3.6             | 4.9            | .0        | .0          | .0                  | .6         | .0              | 90.9       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0                      | .0              | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0                      | .0              | 2.9            | .0        | .0          | .0                  | 1.9        | .0              | 95.1       |
| TOT PCT  | 1.1                | .9        | 1.2  | .0        | .0   | .0              | .0                      | 3.1             | 3.6            | .1        | .4          | .0                  | 1.2        | *               | 91.4       |
| TOT OBS: | 2333               |           |      |           |      |                 |                         |                 |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 | OTHER WEATHER PHENOMENA |                 |                |           |             |                     |            |                 | NO SIG WEA |
|------------|--------------------|-----------|------|-----------|------|-----------------|-------------------------|-----------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL                    | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW |            |
| 00003      | .7                 | .5        | 2.0  | .0        | .0   | .0              | .0                      | 3.0             | 3.0            | .2        | .5          | .0                  | 1.5        | .2              | 91.6       |
| 06009      | 1.8                | 1.3       | 1.6  | .0        | .0   | .0              | .0                      | 4.6             | 6.1            | .3        | .7          | .0                  | 1.1        | .0              | 87.2       |
| 12015      | .9                 | 1.4       | .9   | .0        | .0   | .0              | .0                      | 3.1             | 3.1            | .0        | .3          | .0                  | 1.4        | .0              | 92.1       |
| 18021      | 1.0                | .7        | .3   | .0        | .0   | .0              | .0                      | 2.0             | 2.2            | .0        | .2          | .0                  | .8         | .0              | 94.8       |
| TOT PCT    | 1.1                | 1.0       | 1.2  | .0        | .0   | .0              | .0                      | 3.2             | 3.6            | .1        | .4          | .0                  | 1.2        | *               | 91.4       |
| TOT OBS:   | 2392               |           |      |           |      |                 |                         |                 |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.6                | 7.3  | 4.1   | .2    | .0    | .0  |           | 13.2     | 9.3      | 14.5       | 14.0  | 14.7  | 14.3  | 10.3  | 15.5  | 11.8  | 13.3  |
| NE       | 1.2                | 9.7  | 5.6   | .3    | .0    | .0  |           | 16.8     | 9.7      | 16.4       | 19.4  | 13.2  | 16.6  | 17.4  | 16.5  | 18.4  | 20.9  |
| E        | .9                 | 6.4  | 3.5   | .1    | .0    | .0  |           | 11.0     | 9.4      | 12.0       | 12.5  | 9.2   | 9.1   | 12.5  | 9.2   | 10.8  | 13.1  |
| SE       | .5                 | 3.4  | 1.3   | .2    | .0    | .0  |           | 5.4      | 9.0      | 5.0        | 2.2   | 6.1   | 3.9   | 6.7   | 4.5   | 6.0   | 3.7   |
| S        | 1.0                | 3.0  | 1.7   | .3    | .0    | .0  |           | 6.0      | 9.6      | 5.6        | 3.9   | 7.1   | 6.4   | 6.9   | 6.4   | 5.4   | 3.3   |
| SW       | 1.0                | 6.2  | 4.9   | .9    | .0    | .0  |           | 13.0     | 11.0     | 11.3       | 12.4  | 13.7  | 14.7  | 13.4  | 14.7  | 13.6  | 9.0   |
| W        | 1.9                | 8.2  | 5.8   | .6    | .0    | .0  |           | 16.5     | 10.1     | 16.4       | 11.7  | 17.8  | 14.3  | 19.1  | 16.8  | 16.6  | 9.7   |
| NW       | 1.3                | 7.0  | 3.4   | .5    | .0    | .0  |           | 12.2     | 9.3      | 11.8       | 15.2  | 11.7  | 14.8  | 10.7  | 12.1  | 11.8  | 16.2  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 5.9                |      |       |       |       |     |           | 5.9      | .0       | 6.9        | 8.7   | 6.5   | 5.9   | 3.1   | 4.3   | 5.5   | 10.8  |
| TOT OBS  | 537                | 1772 | 1046  | 111   | 0     | 0   | 3466      |          | 9.2      | 611        | 184   | 723   | 203   | 589   | 211   | 750   | 195   |
| TOT PCT  | 15.5               | 51.1 | 30.2  | 3.2   | .0    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |      |           |          |          | 00         | 03    | 06    | 18    |
| N        | 4.6                | 7.2  | 1.4   | .0    | .0  |      |           | 13.2     | 9.3      | 14.4       | 14.6  | 11.7  | 12.1  |
| NE       | 5.5                | 9.5  | 1.8   | .1    | .0  |      |           | 17.1     | 9.7      | 17.1       | 14.0  | 17.2  | 18.9  |
| E        | 3.8                | 6.4  | .7    | .0    | .0  |      |           | 11.0     | 9.4      | 12.1       | 9.2   | 11.7  | 11.3  |
| SE       | 2.3                | 2.7  | .4    | .0    | .0  |      |           | 5.4      | 9.0      | 4.3        | 5.6   | 6.1   | 5.5   |
| S        | 2.3                | 2.7  | .8    | .2    | .0  |      |           | 6.0      | 9.6      | 5.3        | 6.9   | 6.8   | 5.0   |
| SW       | 3.5                | 7.0  | 2.4   | .1    | .0  |      |           | 13.0     | 11.0     | 11.5       | 13.9  | 13.7  | 12.6  |
| W        | 5.3                | 8.9  | 2.2   | .1    | .0  |      |           | 16.5     | 10.1     | 15.3       | 17.1  | 18.5  | 15.2  |
| NW       | 4.7                | 6.2  | 1.2   | .2    | .0  |      |           | 12.2     | 9.3      | 12.6       | 12.4  | 11.1  | 12.7  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 5.9                |      |       |       |     |      |           | 5.9      | .0       | 7.3        | 6.4   | 3.4   | 6.6   |
| TOT OBS  | 1312               | 1757 | 377   | 20    | 0   | 3466 |           |          | 9.2      | 795        | 926   | 800   | 945   |
| TOT PCT  | 37.9               | 50.7 | 10.9  | .6    | .0  |      |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1930-1970  
(OVER-ALL) 1855-1970

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38.1N 20.7W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|------|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |      |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 7.3  | 7.9  | 54.2 | 27.3               | 3.3   | .0    | .0  | 8.9  | 100.0    | 795       |
| 06009 | 6.4  | 9.6  | 52.6 | 28.2               | 3.2   | .0    | .0  | 9.0  | 100.0    | 926       |
| 12015 | 3.4  | 10.5 | 48.1 | 35.3               | 2.8   | .0    | .0  | 9.6  | 100.0    | 800       |
| 18021 | 6.6  | 10.1 | 49.6 | 30.3               | 3.5   | .0    | .0  | 9.2  | 100.0    | 945       |
| TOT   | 206  | 331  | 1772 | 1046               | 111   | 0     | 0   | 9.2  |          | 3466      |
| PCT   | 5.9  | 9.5  | 51.1 | 30.2               | 3.2   | .0    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|--------|-----------|------------------|
|          |      |      |      |        |           |                  |
| N        | 4.0  | 3.5  | 3.9  | 1.4    | 4.1       |                  |
| NE       | 5.2  | 4.5  | 4.9  | 2.3    | 4.1       |                  |
| E        | 3.1  | 3.3  | 4.2  | 1.7    | 4.4       |                  |
| SE       | 1.9  | 1.4  | 2.0  | 1.0    | 4.3       |                  |
| S        | 2.1  | .8   | 1.5  | .8     | 4.0       |                  |
| SW       | 5.0  | 2.5  | 3.6  | 2.2    | 4.1       |                  |
| W        | 5.7  | 4.2  | 5.3  | 2.7    | 4.2       |                  |
| NW       | 2.7  | 3.4  | 3.6  | 1.5    | 4.3       |                  |
| VAR      | .0   | .0   | .0   | .0     | .0        |                  |
| CALM     | 2.2  | .9   | 1.2  | .1     | 3.1       |                  |
| TOT OBS  | 639  | 487  | 607  | 277    | 2010      |                  |
| TOT PCT  | 31.8 | 24.2 | 30.2 | 13.8   | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .1  | *   | .2  | .7  | 1.6  | 1.2  | .3   | .2   | .0   | *     | 8.4             |           |
| NE      | *   | .0  | .1  | 1.0 | 2.6  | 1.2  | .4   | *    | *    | .0    | 11.4            |           |
| E       | *   | .0  | .2  | .9  | 1.5  | 1.4  | .3   | .1   | .0   | .1    | 7.7             |           |
| SE      | *   | .0  | .1  | .9  | .6   | .3   | .1   | *    | .0   | .1    | 4.1             |           |
| S       | *   | .0  | .2  | .2  | .4   | .3   | .3   | .0   | .0   | .0    | 3.7             |           |
| SW      | .0  | *   | .1  | 1.2 | 1.3  | .6   | .4   | .2   | .0   | .1    | 9.3             |           |
| W       | .1  | *   | .4  | 1.7 | 1.8  | 1.0  | .3   | .1   | *    | .1    | 12.2            |           |
| NW      | *   | *   | .3  | 1.1 | 1.2  | .8   | .2   | *    | .0   | *     | 7.5             |           |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM    | .0  | .0  | *   | .2  | .5   | .0   | *    | .0   | .0   | .0    | 3.6             |           |
| TOT OBS | 7   | 2   | 35  | 159 | 230  | 139  | 49   | 13   | 2    | 10    | 1364            | 2010      |
| TOT PCT | .3  | .1  | 1.7 | 7.9 | 11.4 | 6.9  | 2.4  | .6   | .1   | .5    | 67.9            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .4        | .6   | .6   | .6   | .6   | .6   | .6    | .6   |
| >5000          | .8        | 1.2  | 1.3  | 1.3  | 1.3  | 1.3  | 1.3   | 1.3  |
| >3500          | 2.8       | 3.5  | 3.7  | 3.7  | 3.7  | 3.7  | 3.7   | 3.7  |
| >2000          | 8.9       | 10.3 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5  | 10.5 |
| >1000          | 18.6      | 21.5 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1  | 22.1 |
| >600           | 23.7      | 28.8 | 29.8 | 29.8 | 29.8 | 29.8 | 29.8  | 29.8 |
| >300           | 24.6      | 30.4 | 31.4 | 31.4 | 31.5 | 31.5 | 31.5  | 31.5 |
| >150           | 24.6      | 30.5 | 31.5 | 31.5 | 31.6 | 31.6 | 31.6  | 31.6 |
| >0             | 24.7      | 30.8 | 31.9 | 31.9 | 31.9 | 31.9 | 31.9  | 31.9 |
| TOTAL          | 505       | 630  | 653  | 653  | 654  | 654  | 654   | 654  |

TOTAL NUMBER OF OBS: 2048

PCT FREQ NH <5/8: 68.1

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|--|-----|------|------|------|------|-----|-----|-----|-----|-------|-----------|
|  | 7.9 | 16.3 | 18.8 | 14.6 | 10.5 | 6.3 | 9.0 | 7.1 | 9.2 | .2    | 2154      |



PERIOD: (PRIMARY) 1930-1970  
(OVER-ALL) 1855-1970

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | .0  | .0   | .0   | *    | .0  | .0   | *     |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0   | *    | *    | .0  | .0   | .1    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0   | *    | .1   | .0  | .0   | .1    |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | *    | *    | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %  | *    | *    | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
| 2<5          | PCP    | *    | .1   | .1   | .1  | .0  | .0   | *    | *    | .0  | .0   | .3    |              |
|              | NO PCP | .0   | .2   | .1   | .1  | *   | .2   | .4   | .1   | .0  | *    | 1.2   |              |
|              | TOT %  | *    | .3   | .2   | .1  | *   | .2   | .5   | .1   | .0  | *    | 1.5   |              |
| 5<10         | PCP    | .2   | .2   | .2   | .1  | .2  | .5   | .4   | .2   | .0  | .0   | 1.9   |              |
|              | NO PCP | 1.4  | 1.6  | 1.0  | .6  | .6  | 2.0  | 2.5  | 1.1  | .0  | .2   | 11.0  |              |
|              | TOT %  | 1.5  | 1.8  | 1.2  | .8  | .8  | 2.5  | 2.9  | 1.3  | .0  | .2   | 13.0  |              |
| 10+          | PCP    | *    | .1   | .2   | .0  | *   | .2   | .1   | .2   | .0  | .0   | .9    |              |
|              | NO PCP | 11.0 | 14.5 | 10.7 | 5.3 | 4.4 | 10.1 | 14.7 | 9.6  | .0  | 4.2  | 84.5  |              |
|              | TOT %  | 11.0 | 14.7 | 10.9 | 5.3 | 4.5 | 10.3 | 14.8 | 9.8  | .0  | 4.2  | 85.4  |              |
| TOT OBS      |        |      |      |      |     |     |      |      |      |     |      |       | 2329         |
| TOT PCT      |        | 12.6 | 16.8 | 12.2 | 6.2 | 5.3 | 13.0 | 18.2 | 11.3 | .0  | 4.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | *   | *   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0   | *   | *   | .0   | .0   | .0   | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | *    | .0  | .0  | .0   | *    | *    | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0   | .0   | *    | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | *    | .0  | .0  | .0   | *    | .1   | .0  | .0   | .1    |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .0   | .0  | .0  | .0   | *    | *    | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .0   | .0  | .0  | .0   | .1   | .0   | .0  | .0   | .1    |              |
| 2<5          | 0-3        | .0   | *    | .0   | .0  | .0  | .0   | .1   | .0   | .0  | .0   | .1    |              |
|              | 4-10       | *    | .1   | .1   | .1  | *   | .1   | .1   | *    | .0  | .0   | .5    |              |
|              | 11-21      | .0   | .1   | .1   | *   | *   | .1   | .3   | .1   | .0  | .0   | .6    |              |
|              | 22+        | .0   | .0   | *    | .1  | .0  | *    | *    | .0   | .0  | .0   | .1    |              |
|              | TOT %      | *    | .2   | .1   | .1  | .1  | .1   | .4   | .1   | .0  | .1   | 1.3   |              |
| 5<10         | 0-3        | .2   | .1   | .1   | *   | .1  | .2   | .3   | .1   | .0  | .2   | 1.1   |              |
|              | 4-10       | .7   | .8   | .6   | .3  | .2  | .7   | .8   | .6   | .0  | .0   | 4.6   |              |
|              | 11-21      | .6   | .8   | .5   | .3  | .2  | 1.1  | 1.4  | .5   | .0  | .0   | 5.4   |              |
|              | 22+        | *    | *    | .0   | .2  | .2  | .4   | .1   | .2   | .0  | .0   | .9    |              |
|              | TOT %      | 1.5  | 1.7  | 1.1  | .6  | .7  | 2.3  | 2.6  | 1.3  | .0  | .2   | 12.0  |              |
| 10+          | 0-3        | 1.4  | 1.0  | .8   | .5  | 1.0 | .7   | 1.4  | 1.0  | .0  | 5.2  | 13.0  |              |
|              | 4-10       | 6.0  | 8.1  | 5.8  | 3.3 | 2.7 | 4.9  | 7.2  | 6.0  | .0  | .0   | 44.1  |              |
|              | 11-21      | 3.5  | 5.1  | 3.5  | 1.2 | 1.6 | 4.0  | 4.9  | 3.0  | .0  | .0   | 26.8  |              |
|              | 22+        | .2   | .3   | .2   | .2  | .2  | .5   | .4   | .3   | .0  | .0   | 2.4   |              |
|              | TOT %      | 11.2 | 14.5 | 10.3 | 5.2 | 5.5 | 10.2 | 14.0 | 10.3 | .0  | 5.2  | 86.3  |              |
| TOT OBS      |            |      |      |      |     |     |      |      |      |     |      |       | 2881         |
| TOT PCT      |            | 12.8 | 16.4 | 11.6 | 6.0 | 6.2 | 12.7 | 17.1 | 11.8 | .0  | 5.5  | 100.0 |              |

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PERIOD: (PRIMARY) 1930-1970  
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38.1N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .2         | .2         | .6         | 7.3        | 11.4         | 5.2          | 1.5          | .7           | .2           | .9    | 28.2  | 71.8               | 536          |
| 06009          | .4         | .0         | 2.2        | 10.0       | 12.8         | 8.4          | 2.2          | .8           | .2           | .4    | 37.3  | 62.7               | 509          |
| 12015          | .7         | .2         | 2.2        | 6.7        | 10.8         | 6.5          | 3.5          | .7           | .0           | .2    | 31.6  | 68.4               | 538          |
| 18021          | .0         | .0         | 1.7        | 6.1        | 9.7          | 6.4          | 2.4          | .2           | .0           | .6    | 27.0  | 73.0               | 544          |
| TOT            | 7          | 2          | 35         | 149        | 237          | 141          | 51           | 13           | 2            | 11    | 658   | 1469               | 2127         |
| PCT            | .3         | .1         | 1.6        | 7.5        | 11.1         | 6.6          | 2.4          | .6           | .1           | .5    | 30.9  | 69.1               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | .0    | .0  | 1.5 | 11.3 | 87.2 | 717          |
| 06009          | .0   | .3    | .3  | 1.3 | 15.5 | 82.7 | 757          |
| 12015          | .0   | .0    | .3  | 1.4 | 11.0 | 87.3 | 700          |
| 18021          | .1   | .4    | .0  | .9  | 10.3 | 88.3 | 767          |
| TOT            | 1    | 5     | 4   | 38  | 354  | 2539 | 2941         |
| PCT            | *    | .2    | .1  | 1.3 | 12.0 | 86.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><5000 | <600<br><1 | <1000<br><5 | 1000+<br>ANDS+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|----------------|-------------------|--------------|
| 00003          | .2            | 1.0        | 9.3         | 20.3           | 70.4              | 507          |
| 06009          | .4            | 2.7        | 14.2        | 24.9           | 60.8              | 485          |
| 12015          | .8            | 3.2        | 11.0        | 21.5           | 67.5              | 526          |
| 18021          | .0            | 1.7        | 8.3         | 19.4           | 72.3              | 530          |
| TOT            | 7             | 44         | 218         | 440            | 1390              | 2048         |
| PCT            | .3            | 2.1        | 10.6        | 21.5           | 67.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .1    | .0    | .0    | .0     | 2            | .1          |
| 80/84  | .0   | .0    | *     | .3    | .9    | .8    | .4    | .3     | 57           | 2.8         |
| 75/79  | .0   | *     | *     | .6    | 3.6   | 7.7   | 7.2   | 3.5    | 460          | 22.8        |
| 70/74  | .0   | .0    | .0    | 1.0   | 9.4   | 17.4  | 20.6  | 15.5   | 1288         | 63.9        |
| 65/69  | .0   | .0    | .0    | .5    | 1.1   | 3.1   | 3.2   | 7.4    | 207          | 10.3        |
| 60/64  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .1     | 3            | .1          |
| TOTAL  | 0    | 1     | 2     | 49    | 308   | 584   | 635   | 438    | 2017         | 100.0       |
| PCT    | .0   | *     | .1    | 2.4   | 15.3  | 29.0  | 31.5  | 21.7   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM |
|-------|------|------|------|-----|-----|------|------|------|-----|------|
| 85/89 | .0   | *    | *    | .0  | .0  | .0   | .0   | .0   | .0  | .0   |
| 80/84 | .2   | .5   | .4   | .1  | *   | .4   | .5   | .4   | .0  | .2   |
| 75/79 | 1.9  | 2.4  | 2.4  | 1.5 | 1.6 | 4.4  | 5.2  | 2.2  | .0  | 1.1  |
| 70/74 | 8.2  | 11.4 | 8.1  | 4.2 | 3.2 | 8.0  | 10.5 | 7.3  | .0  | 2.8  |
| 65/69 | 2.4  | 1.9  | 1.5  | .5  | .2  | .5   | 1.2  | 1.7  | .0  | .2   |
| 60/64 | *    | *    | .0   | .0  | .0  | .0   | .0   | *    | .0  | .0   |
| TOTAL | 12.8 | 16.4 | 12.5 | 6.3 | 5.1 | 13.3 | 17.5 | 11.6 | .0  | 4.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 81  | 77  | 75  | 72  | 68 | 66 | 64  | 71.8 | 804          |
| 06009          | 82  | 77  | 75  | 72  | 68 | 66 | 65  | 71.6 | 930          |
| 12015          | 88  | 82  | 80  | 74  | 70 | 68 | 63  | 74.4 | 789          |
| 18021          | 89  | 84  | 80  | 74  | 70 | 67 | 66  | 74.4 | 935          |
| TOT            | 89  | 81  | 78  | 73  | 68 | 67 | 63  | 73.0 | 3458         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.3   | 9.0   | 26.9  | 35.0  | 27.7  | 82    | 520    |      |              |
| 06009          | .0   | 1.1   | 8.8   | 26.3  | 34.0  | 29.8  | 83    | 524    |      |              |
| 12015          | .0   | 4.6   | 20.0  | 30.7  | 27.5  | 17.2  | 78    | 501    |      |              |
| 18021          | .0   | 3.4   | 24.7  | 32.2  | 28.9  | 10.7  | 76    | 522    |      |              |
| TOT            | 0    | 54    | 322   | 600   | 649   | 442   | 80    | 2067   |      |              |

PERIOD: (PRIMARY) 1930-1970  
(OVER-ALL) 1855-1970

# AUGUST

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38.1N 26.7W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | #0<br>FUG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | *        | .2       | .2       | 9     | .0       | .4        |
| 9/10               | .0       | .0       | .0       | .1       | .3       | .5       | .1       | 20    | .0       | .9        |
| 7/8                | .0       | .0       | .0       | *        | .9       | .6       | .0       | 32    | .0       | 1.5       |
| 6                  | .0       | .0       | .1       | .4       | 1.0      | .2       | .0       | 38    | .0       | 1.8       |
| 5                  | .0       | .0       | .0       | .4       | 1.6      | .1       | .0       | 45    | *        | 2.0       |
| 4                  | .0       | .0       | .1       | 1.8      | 1.9      | .1       | .0       | 82    | .0       | 3.8       |
| 3                  | .0       | .0       | .3       | 2.9      | .9       | *        | .0       | 88    | *        | 4.1       |
| 2                  | .0       | .0       | 1.1      | 5.4      | 1.1      | *        | .0       | 163   | .1       | 7.5       |
| 1                  | .0       | .1       | 2.3      | 8.1      | .7       | .0       | .0       | 241   | *        | 11.2      |
| 0                  | .0       | .4       | 6.7      | 8.1      | .9       | *        | .0       | 347   | *        | 16.1      |
| -1                 | .0       | .2       | 9.1      | 5.6      | .2       | .0       | .0       | 326   | *        | 15.1      |
| -2                 | .0       | .7       | 8.0      | 4.0      | .1       | .0       | .0       | 277   | *        | 12.9      |
| -3                 | *        | .6       | 7.2      | 1.4      | *        | .0       | .0       | 199   | .0       | 9.3       |
| -4                 | *        | 1.4      | 4.4      | .8       | *        | .0       | .0       | 144   | *        | 6.7       |
| -5                 | .0       | .7       | 2.7      | .2       | .0       | .0       | .0       | 78    | *        | 3.6       |
| -6                 | .0       | .5       | .8       | .1       | .0       | .0       | .0       | 30    | .0       | 1.4       |
| -7/-8              | *        | .3       | .7       | .1       | .0       | .0       | .0       | 24    | .0       | 1.1       |
| -9/-10             | .0       | .1       | *        | .0       | .0       | .0       | .0       | 4     | .0       | .2        |
| TOTAL              | 3        | 109      | 934      | 846      | 210      | 39       | 6        | 2147  | 10       | 2137      |
| PCT                | .1       | 5.1      | 43.5     | 39.4     | 9.8      | 1.8      | .3       | 100.0 | .5       | 99.5      |

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 1.6  | .0    | .0    | .0    | .0  | 2.0  | .6  | 1.9  | .1    | .0    | .0    | .0  | 2.6  |
| 1-2     | .3  | 3.4  | 1.2   | .0    | .0    | .0  | 5.0  | *   | 6.4  | 1.8   | .0    | .0    | .0  | 8.2  |
| 3-4     | .0  | .9   | 2.4   | .2    | .0    | .0  | 3.6  | .1  | 2.3  | 2.6   | .3    | .0    | .0  | 5.3  |
| 5-6     | .0  | .0   | .6    | .0    | .0    | .0  | .6   | .0  | .1   | 1.1   | .0    | .0    | .0  | 1.2  |
| 7       | .0  | .1   | .0    | .0    | .0    | .0  | .1   | .0  | .0   | 1.2   | .0    | .0    | .0  | 1.2  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 6.1  | 4.4   | .2    | .0    | .0  | 11.4 | .7  | 10.7 | 6.8   | .3    | .0    | .0  | 18.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | 1.5  | .0    | .0    | .0    | .0  | 1.8  | .4  | .6   | .0    | .0    | .0    | .0  | 1.1 |
| 1-2     | .4  | 3.8  | 1.2   | .0    | .0    | .0  | 5.4  | .0  | 2.2  | .1    | .0    | .0    | .0  | 2.3 |
| 3-4     | .0  | 2.4  | 2.5   | .0    | .0    | .0  | 4.9  | .1  | .3   | .6    | .0    | .0    | .0  | 1.0 |
| 5-6     | .0  | .0   | .9    | .1    | .0    | .0  | 1.0  | .0  | .0   | .4    | .0    | .0    | .0  | .4  |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .3   | .0  | .1   | .2    | .0    | .0    | .0  | .4  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 7.7  | 4.8   | .2    | .0    | .0  | 13.5 | .6  | 3.3  | 1.3   | .0    | .0    | .0  | 5.2 |



PERIOD: (OVER-ALL) 1963-1970

AUGUST

AREA 0001 AZORES  
38.1N 26.7W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | .2   | .1    | .0    | .0    | .0  | .6  | .0  | .4   | .0    | .0    | .0    | .0  | .4   |
| 1-2     | .3  | 1.2  | .8    | .0    | .0    | .0  | 2.3 | .2  | 4.4  | 1.5   | .0    | .0    | .0  | 6.2  |
| 3-4     | .0  | .5   | .3    | .2    | .0    | .0  | 1.1 | .0  | 1.4  | 3.0   | .4    | .0    | .0  | 4.9  |
| 5-6     | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0  | .0   | 1.7   | .7    | .0    | .0  | 2.3  |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .4    | .2    | .0    | .0  | .7   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | *     | .0    | .0  | .2   |
| 10-11   | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .2    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .5  | 2.1  | 2.0   | .2    | .0    | .0  | 4.8 | .2  | 6.3  | 6.8   | 1.6   | .0    | .0  | 14.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .6  | 1.1  | .0    | .0    | .0    | .0  | 1.7  | .7  | 1.2  | .0    | .0    | .0    | .0  | 1.8  |           |
| 1-2     | .1  | 4.9  | 1.4   | .0    | .0    | .0  | 6.4  | .1  | 2.8  | 1.1   | .0    | .0    | .0  | 4.0  |           |
| 3-4     | .1  | 2.2  | 4.2   | .0    | .0    | .0  | 6.5  | .0  | 2.0  | 2.1   | .0    | .0    | .0  | 4.0  |           |
| 5-6     | .0  | .2   | 1.4   | .2    | .0    | .0  | 1.9  | .0  | .2   | 1.4   | .0    | .0    | .0  | 1.6  |           |
| 7       | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | *     | .2    | .0    | .0  | .3   |           |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .8  | 8.4  | 7.2   | .6    | .0    | .0  | 17.1 | .8  | 6.2  | 4.5   | .2    | .0    | .0  | 11.8 | 97.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.5 | 8.8  | .2    | .0    | .0    | .0  | 15.5  |         |
| 1-2     | 2.0 | 28.9 | 8.9   | .0    | .0    | .0  | 39.7  |         |
| 3-4     | .4  | 12.1 | 17.4  | 1.1   | .0    | .0  | 30.9  |         |
| 5-6     | .0  | .7   | 7.7   | 1.0   | .0    | .0  | 9.4   |         |
| 7       | .0  | .2   | 2.3   | .7    | .0    | .0  | 3.3   |         |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .4    |         |
| 10-11   | .0  | .0   | .4    | .4    | .0    | .0  | .7    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.8 | 50.7 | 37.2  | 3.3   | .0    | .0  | 100.0 | 818     |

PERIOD: (OVER-ALL) 1949-1970

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1   | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|------|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | 4.2  | 16.4 | 15.6 | 5.3  | 1.3  | .2  | .3    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 716         | 3 |
| 6-7             | .2   | 1.4  | 8.7  | 7.7  | 3.9  | 1.2 | .2    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 386         | 5 |
| 8-9             | .1   | .9   | 3.1  | 3.5  | 3.5  | 1.0 | .4    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 205         | 5 |
| 10-11           | .0   | .5   | .4   | 1.4  | .5   | .6  | .2    | .1 | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 63          | 6 |
| 12-13           | .0   | .0   | .5   | .4   | .4   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 23          | 5 |
| >13             | .0   | .0   | .0   | .2   | .1   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 7           | 7 |
| INDET           | 5.9  | 3.0  | 3.1  | 1.2  | .8   | .2  | .2    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 249         | 2 |
| TOTAL           | 171  | 367  | 517  | 334  | 174  | 56  | 24    | 3  | 2     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 1649        | 4 |
| PCT             | 10.4 | 22.3 | 31.4 | 20.3 | 10.6 | 3.4 | 1.5   | .2 | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |

## SEPTEMBER

PERIOD: (PRIMARY) 1927-1973  
(OVER-ALL) 1855-1973AREA 0001 AZORES  
38.1N 26.7W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                           |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|---------------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FGG WQ PCPN | FGG WQ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST BLWG SNOW | NO SIG WEA |  |
| N                  | .3   | .5        | .7   | .0        | .0   | .0              | .0   | 1.5             | 3.0            | .2                      | .2          | .0                  | .8         | .2                        | 93.9       |  |
| NE                 | 1.8  | 2.6       | 1.3  | .0        | .0   | .0              | .0   | 5.3             | 1.3            | .0                      | .0          | .0                  | .0         | .0                        | 93.4       |  |
| E                  | .9   | 2.1       | .9   | .0        | .0   | .0              | .0   | 3.9             | 2.9            | .0                      | .0          | .0                  | .9         | .0                        | 92.3       |  |
| SE                 | 2.0  | 2.9       | 1.0  | .0        | .0   | .0              | .0   | 5.9             | 4.1            | .6                      | .5          | .0                  | 1.4        | .0                        | 88.0       |  |
| S                  | .5   | 3.7       | .4   | .0        | .0   | .0              | .0   | 4.6             | 4.1            | .6                      | .0          | .0                  | .7         | .0                        | 90.0       |  |
| SW                 | 2.4  | 2.9       | 1.9  | .0        | .0   | .0              | .0   | 7.3             | 3.6            | .6                      | .0          | .0                  | .4         | .0                        | 88.2       |  |
| W                  | 1.6  | 2.5       | 1.4  | .0        | .0   | .0              | .0   | 5.4             | 3.3            | .7                      | .4          | .0                  | .9         | .0                        | 89.2       |  |
| NW                 | .4   | 1.1       | 1.3  | .0        | .0   | .0              | .0   | 2.7             | 4.7            | .1                      | .4          | .0                  | 1.1        | .1                        | 90.9       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | .0         |  |
| CALM               | .0   | .0        | 1.5  | .0        | .0   | .0              | .0   | 1.5             | 4.5            | .0                      | .0          | .0                  | .0         | .0                        | 93.9       |  |
| TOT PCT            | 1.2  | 2.2       | 1.2  | .0        | .0   | .0              | .0   | 4.6             | 3.5            | .4                      | .2          | .0                  | .7         | *                         | 90.6       |  |
| TOT OBS:           | 2594 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                           |            |  |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                                       |                  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003               | 1.0                | 1.6          | 2.1  | .0           | .0   | .0                    | .0   | 4.6                     | 3.4               | 1.1          | .3                | .0                        | .8            | .0                                    | 89.9             |
| 06009               | 1.5                | 4.7          | 1.5  | .0           | .0   | .0                    | .0   | 7.8                     | 3.5               | .5           | .0                | .0                        | .2            | .2                                    | 87.9             |
| 12015               | 1.1                | 1.4          | 1.0  | .0           | .0   | .0                    | .0   | 3.6                     | 3.3               | .0           | .4                | .0                        | .4            | .0                                    | 92.3             |
| 18021               | 1.2                | .9           | .1   | .0           | .0   | .0                    | .0   | 2.2                     | 3.3               | .0           | .0                | .0                        | 1.4           | .0                                    | 93.1             |
| TOT PCT<br>TOT OBS: | 1.2<br>2658        | 2.1          | 1.2  | .0           | .0   | .0                    | .0   | 4.5                     | 3.4               | .4           | .2                | .0                        | .7            | *                                     | 90.9             |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00   |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |       |
| N        | .8                 | 6.0  | 5.3   | 1.0   | .1    | .0  |      | 13.2         | 11.8        |             | 12.8       | 9.1   | 13.9  | 14.9  | 12.5  | 16.3  | 12.8  | 14.4  |
| NE       | .8                 | 5.9  | 4.3   | .5    | *     | .0  |      | 11.5         | 10.6        |             | 10.5       | 11.2  | 11.7  | 14.0  | 11.7  | 13.6  | 10.2  | 13.8  |
| E        | 1.3                | 5.0  | 2.7   | .2    | *     | .0  |      | 9.3          | 9.4         |             | 9.3        | 10.3  | 8.9   | 11.3  | 8.6   | 7.7   | 9.7   | 9.5   |
| SE       | 1.0                | 3.7  | 2.5   | .3    | *     | .0  |      | 7.5          | 9.7         |             | 6.7        | 7.4   | 6.8   | 5.2   | 8.7   | 8.8   | 8.4   | 6.6   |
| S        | .9                 | 4.6  | 3.8   | .8    | .2    | .0  |      | 10.2         | 11.9        |             | 10.8       | 12.9  | 8.6   | 8.6   | 10.7  | 8.0   | 12.2  | 9.1   |
| SW       | 1.1                | 6.6  | 6.8   | 1.3   | .2    | .0  |      | 15.8         | 12.2        |             | 15.8       | 13.3  | 16.3  | 15.3  | 17.4  | 15.1  | 15.8  | 13.7  |
| W        | 1.2                | 7.3  | 6.1   | 1.3   | .1    | .0  |      | 15.9         | 11.7        |             | 17.6       | 20.5  | 17.2  | 14.2  | 15.7  | 14.5  | 13.4  | 15.7  |
| NW       | .8                 | 5.5  | 5.3   | 1.3   | .2    | .0  |      | 13.0         | 12.7        |             | 12.9       | 10.9  | 12.4  | 14.0  | 12.6  | 12.0  | 14.3  | 14.1  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0           | .0          |             | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.5                |      |       |       |       |     |      | 3.5          | .0          |             | 3.7        | 4.4   | 4.3   | 4.5   | 2.1   | 3.9   | 3.3   | 3.1   |
| TOT OBS  | 429                | 1685 | 1387  | 252   | 29    | 0   | 3782 |              | 11.1        |             | 595        | 206   | 800   | 220   | 678   | 233   | 823   | 227   |
| TOT PCT  | 11.3               | 44.6 | 36.7  | 6.7   | .8    | .0  |      | 100.0        |             |             | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 3.1  | 7.3                | 2.4   | .4    | .0       |      | 13.2         | 11.8        | 11.8        | 14.1       | 13.5     | 13.1     |  |
| NE       | 3.0  | 6.8                | 1.6   | .1    | .0       |      | 11.5         | 10.6        | 10.7        | 12.2       | 12.2     | 11.0     |  |
| E        | 3.1  | 5.2                | .8    | .1    | .0       |      | 9.3          | 9.4         | 9.6         | 9.4        | 8.4      | 9.6      |  |
| SE       | 2.8  | 3.7                | .9    | .1    | .0       |      | 7.5          | 9.7         | 6.9         | 6.4        | 8.7      | 8.0      |  |
| S        | 2.8  | 5.1                | 1.9   | .5    | *        |      | 10.2         | 11.9        | 11.3        | 8.2        | 10.0     | 11.5     |  |
| SW       | 3.7  | 8.4                | 3.4   | .4    | .0       |      | 15.8         | 12.2        | 15.1        | 16.1       | 16.8     | 15.3     |  |
| W        | 3.8  | 8.4                | 3.4   | .3    | .0       |      | 15.9         | 11.7        | 18.4        | 16.5       | 15.4     | 13.9     |  |
| NW       | 2.6  | 7.1                | 2.7   | .6    | *        |      | 13.0         | 12.7        | 12.4        | 12.7       | 12.5     | 14.3     |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 3.5  |                    |       |       |          |      | 3.5          | .0          | 3.9         | 4.3        | 2.5      | 3.2      |  |
| TOT OBS  | 1076 | 1966               | 647   | 91    | 2        | 3782 |              | 11.1        | 801         | 1020       | 911      | 1050     |  |
| TOT PCT  | 28.5 | 52.0               | 17.1  | 2.4   | .1       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |

PERIOD: (PRIMARY) 1927-1973  
(OVER-ALL) 1855-1973

# SEPTEMBER

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38.1N 26.7W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 4R+  | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|----|------|-------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |    |      |       |          |           |
| 0000 | 3.9  | 7.4 | 47.4 | 35.8               | 5.0   | .5    | .0 | .0   | 10.6  | 100.0    | 801       |
| 0600 | 4.3  | 7.6 | 48.0 | 32.9               | 6.3   | .8    | .0 | .0   | 10.6  | 100.0    | 1020      |
| 1200 | 2.5  | 7.9 | 42.3 | 39.6               | 6.9   | .8    | .0 | .0   | 11.4  | 100.0    | 911       |
| 1800 | 3.2  | 8.4 | 41.0 | 38.4               | 8.1   | 1.0   | .0 | .0   | 11.5  | 100.0    | 1050      |
| TOT  | 132  | 297 | 1685 | 1387               | 252   | 29    | 0  | 11.1 |       |          | 3782      |
| PCT  | 3.5  | 7.9 | 44.6 | 36.7               | 6.7   | .8    | .0 |      | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-6<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 3.2  | 3.0  | 4.7  | 1.8          |              | 4.5                    |
| NE       | 2.8  | 2.3  | 3.4  | 1.0          |              | 4.2                    |
| E        | 3.0  | 2.3  | 2.4  | 1.0          |              | 3.9                    |
| SE       | 2.9  | 1.7  | 2.2  | .9           |              | 3.8                    |
| S        | 3.8  | 2.6  | 3.5  | 1.4          |              | 3.9                    |
| SW       | 5.0  | 5.4  | 5.3  | 2.2          |              | 4.1                    |
| W        | 5.0  | 4.2  | 5.6  | 2.1          |              | 4.1                    |
| NW       | 2.9  | 3.5  | 5.3  | 1.4          |              | 4.4                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.0  | .4   | .4   | .4           |              | 3.7                    |
| TOT OBS  | 528  | 542  | 695  | 261          | 2126         | 4.1                    |
| TOT PCT  | 29.5 | 25.5 | 32.7 | 12.3         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000     | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
|         |     |     |     |      |      |      |      |      |       |                    |              |
| 149     | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| N       | .2  | .1  | .1  | 1.0  | 2.0  | 1.3  | .1   | .1   | .0    | .0                 | 7.8          |
| NE      | .2  | .1  | .1  | .5   | 1.4  | .7   | .2   | .0   | .0    | .0                 | 6.4          |
| E       | .0  | .0  | .1  | .5   | 1.3  | .6   | .1   | .1   | .0    | .0                 | 6.0          |
| SE      | .0  | .0  | .0  | .6   | .8   | .4   | .1   | .1   | .0    | .1                 | 5.5          |
| S       | .0  | .2  | .4  | 1.4  | .6   | .3   | .1   | .1   | .0    | .0                 | 8.5          |
| SW      | .0  | .2  | 1.3 | 2.4  | .8   | .5   | .1   | .1   | .0    | .0                 | 12.6         |
| W       | .1  | .2  | 1.4 | 1.5  | 1.1  | .3   | .0   | .0   | .0    | .0                 | 12.1         |
| NW      | .0  | .2  | .9  | 2.1  | 1.1  | .2   | .0   | .0   | .0    | .0                 | 8.5          |
| VAR     | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 | .0           |
| CALM    | .0  | .0  | .3  | .2   | .1   | .0   | .0   | .0   | .0    | .0                 | 1.6          |
| TOT OBS | 8   | 23  | 144 | 278  | 140  | 38   | 9    | 7    | 4     | 1469               | 2126         |
| TOT PCT | .4  | .3  | 1.1 | 6.8  | 13.1 | 6.6  | 1.8  | .4   | .3    | .2                 | 69.1         |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .5          | .6         | .6         | .6         | .6           | .6           | .6            | .6         |
| = OR >5000        | .8          | .9         | 1.0        | 1.0        | 1.0          | 1.0          | 1.0           | 1.0        |
| = OR >3500        | 2.3         | 2.6        | 2.7        | 2.7        | 2.7          | 2.7          | 2.7           | 2.7        |
| = OR >2000        | 8.1         | 9.2        | 9.3        | 9.3        | 9.3          | 9.3          | 9.3           | 9.3        |
| = OR >1000        | 18.7        | 21.9       | 22.1       | 22.1       | 22.2         | 22.2         | 22.2          | 22.2       |
| = OR >600         | 24.0        | 28.3       | 28.7       | 28.8       | 28.8         | 28.8         | 28.8          | 28.8       |
| = OR >300         | 24.6        | 29.2       | 29.8       | 29.9       | 29.9         | 29.9         | 29.9          | 29.9       |
| = OR >150         | 24.8        | 29.4       | 30.0       | 30.2       | 30.2         | 30.2         | 30.2          | 30.2       |
| = OR >0           | 24.9        | 29.7       | 30.3       | 30.5       | 30.6         | 30.6         | 30.6          | 30.6       |
| TOTAL             | 543         | 647        | 661        | 665        | 666          | 666          | 666           | 666        |

TOTAL NUMBER OF OBS: 2178

PCT FREQ NH <5/8: 69.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|-----|-----|-----|-------|--------------|
| 9.5 | 15.6 | 16.0 | 16.9 | 11.1 | 7.5 | 8.0 | 7.2 | 8.1 | .2    | 2296         |



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PERIOD: (PRIMARY) 1927-1973  
(OVER-ALL) 1855-1973

AREA 0001 AZORES  
38.1N 26.7W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT  | TOTAL<br>OBS                                      |
|--------------|--------|------|-----|-----|-----|-----|------|------|------|-----|------|------|---|
| <1/2         | PCP    | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0   |   |
|              | NO PCP | * .0 | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *    |   |
|              | TOT %  | * .0 | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *    |   |
| 1/2<1        | PCP    | .0   | .1  | *   | .0  | *   | .0   | *    | .0   | .0  | .0   | .2   |   |
|              | NO PCP | .0   | .0  | .0  | *   | .0  | .0   | *    | *    | .0  | .0   | .1   |   |
|              | TOT %  | .0   | .1  | *   | *   | *   | .0   | .1   | *    | .0  | .0   | .3   |   |
| 1<2          | PCP    | .0   | *   | .0  | .0  | .0  | *    | .1   | .0   | .0  | .0   | .2   |   |
|              | NO PCP | .0   | *   | .0  | *   | *   | *    | .1   | *    | .0  | .0   | .2   |   |
|              | TOT %  | .0   | .1  | .0  | *   | *   | *    | .2   | *    | .0  | .0   | .4   |   |
| 2<5          | PCP    | .0   | .1  | .1  | .1  | .0  | .2   | .1   | *    | .0  | .0   | .5   |   |
|              | NO PCP | .1   | .1  | .1  | *   | .2  | .1   | .2   | .1   | .0  | .0   | .8   |   |
|              | TOT %  | .1   | .1  | .1  | .1  | .2  | .3   | .3   | .1   | .0  | .0   | 1.3  |   |
| 5<10         | PCP    | .1   | .2  | .2  | .2  | .2  | .7   | .4   | .2   | .0  | .0   | 2.2  |   |
|              | NO PCP | 1.9  | 1.0 | .7  | .9  | 1.2 | 2.0  | 2.5  | 2.4  | .0  | .4   | 12.9 |   |
|              | TOT %  | 2.0  | 1.2 | .8  | 1.0 | 1.4 | 2.7  | 2.9  | 2.6  | .0  | .4   | 15.1 |   |
| 10+          | PCP    | .1   | .1  | .1  | .2  | .3  | .4   | .3   | .1   | .0  | *    | 1.5  |   |
|              | NO PCP | 10.5 | 7.9 | 7.3 | 6.2 | 9.0 | 13.7 | 13.7 | 10.8 | .0  | 2.1  | 81.3 |   |
|              | TOT %  | 10.6 | 8.1 | 7.4 | 6.5 | 9.3 | 14.1 | 14.0 | 10.9 | .0  | 2.2  | 82.9 |   |
| TOT OBS      |        |      |     |     |     |     |      |      |      |     |      |      | 2592  |
| TOT PCT      |        |      |     |     |     |     |      |      |      |     |      |      | 12.7 9.6 8.4 7.6 10.9 17.1 17.4 13.7 .0 2.5 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT  | TOTAL<br>OBS |  |
|--------------|------------|------|-----|-----|-----|-----|------|------|------|-----|------|------|--------------|--|
| <1/2         | 0-3        | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0   |              |  |
|              | 4-10       | *.0  | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *    |              |  |
|              | 11-21      | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0   |              |  |
|              | 22+        | .0   | .0  | .0  | .0  | .0  | .0   | *    | .0   | .0  | .0   | *    |              |  |
|              | TOT %      | *    | .0  | .0  | .0  | .0  | .0   | *    | .0   | .0  | .0   | .1   |              |  |
| 1/2<1        | 0-3        | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0   |              |  |
|              | 4-10       | .0   | .0  | .0  | .0  | .0  | .0   | *    | *    | .0  | .0   | .1   |              |  |
|              | 11-21      | .0   | .1  | *   | *   | *   | .0   | .0   | *    | .0  | .0   | .2   |              |  |
|              | 22+        | .0   | .0  | .0  | .0  | .0  | .0   | *    | *    | .0  | .0   | .1   |              |  |
|              | TOT %      | .0   | .1  | *   | *   | *   | .0   | .1   | .1   | .0  | .0   | .3   |              |  |
| 1<2          | 0-3        | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0   |              |  |
|              | 4-10       | .0   | .0  | .0  | .0  | *   | *    | *    | .0   | .0  | .0   | .1   |              |  |
|              | 11-21      | .0   | *   | .0  | *   | *   | *    | .1   | *    | .0  | .0   | .2   |              |  |
|              | 22+        | *    | *   | .0  | *   | *   | .0   | *    | *    | .0  | .0   | .2   |              |  |
|              | TOT %      | *    | .1  | .0  | *   | .1  | .1   | .2   | *    | .0  | .0   | .4   |              |  |
| 2<5          | 0-3        | .1   | *   | *   | .0  | .0  | *    | *    | .0   | .0  | .0   | .2   |              |  |
|              | 4-10       | *    | *   | .1  | .0  | *   | .1   | .1   | .1   | .0  | .0   | .3   |              |  |
|              | 11-21      | .1   | .1  | *   | .1  | .1  | *    | .1   | .1   | .0  | .0   | .5   |              |  |
|              | 22+        | .1   | .0  | *   | *   | .1  | .1   | *    | .1   | .0  | .0   | .4   |              |  |
|              | TOT %      | .2   | .1  | .2  | .1  | .2  | .2   | .3   | .2   | .0  | .0   | 1.5  |              |  |
| 5<10         | 0-3        | *    | *   | .1  | .1  | .1  | .2   | .2   | .1   | .0  | .3   | 1.2  |              |  |
|              | 4-10       | .7   | .8  | .5  | .3  | .5  | .8   | 1.1  | 1.1  | .0  | .0   | 5.8  |              |  |
|              | 11-21      | .9   | .6  | .3  | .5  | .6  | 1.2  | 1.2  | .9   | .0  | .0   | 6.3  |              |  |
|              | 22+        | .3   | .2  | .1  | .1  | .2  | .4   | .3   | .5   | .0  | .0   | 2.2  |              |  |
|              | TOT %      | 2.0  | 1.5 | 1.1 | 1.2 | 1.4 | 2.6  | 2.8  | 2.6  | .0  | .3   | 15.5 |              |  |
| 10+          | 0-3        | .8   | .7  | .9  | .8  | .9  | 1.0  | .9   | .7   | .0  | 2.8  | 9.4  |              |  |
|              | 4-10       | 5.1  | 4.5 | 4.1 | 3.4 | 4.1 | 5.5  | 6.4  | 4.4  | .0  | .0   | 37.4 |              |  |
|              | 11-21      | 4.4  | 3.5 | 2.4 | 1.7 | 3.1 | 6.0  | 5.3  | 4.5  | .0  | .0   | 31.0 |              |  |
|              | 22+        | .7   | .4  | .2  | .2  | .6  | .9   | .7   | .9   | .0  | .0   | 4.5  |              |  |
|              | TOT %      | 10.9 | 9.1 | 7.6 | 6.1 | 8.6 | 13.4 | 13.3 | 10.5 | .0  | 2.8  | 82.3 |              |  |
| TOT OBS      |            |      |     |     |     |     |      |      |      |     |      |      |              | 3145   |
| TOT PCT      |            |      |     |     |     |     |      |      |      |     |      |      |              | 13.1 10.9 8.8 7.4 10.3 16.3 16.6 13.4 .0 3.2 100.0 |

PERIOD: (PRIMARY) 1927-1973  
(OVER-ALL) 1855-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|--------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                    |              |
| 00003 | .2  | .4  | 1.0 | 6.8 | 10.9 | 5.1  | 1.0  | .2   | .4   | .2    | 26.1  | 73.9               | 514          |
| 06009 | .6  | .6  | 1.5 | 8.0 | 13.4 | 8.3  | 1.7  | .2   | .0   | .2    | 34.5  | 65.5               | 528          |
| 12015 | .2  | .2  | 1.1 | 5.6 | 13.8 | 6.4  | 2.1  | .5   | .3   | .3    | 30.5  | 69.5               | 623          |
| 18021 | .5  | .0  | .7  | 5.6 | 11.9 | 5.6  | 1.9  | .7   | .5   | .2    | 27.6  | 72.4               | 587          |
| TOT   | 8   | 6   | 24  | 145 | 283  | 143  | 38   | 9    | 7    | 5     | 668   | 1584               | 2252         |
| PCT   | .4  | .3  | 1.1 | 6.4 | 12.6 | 6.3  | 1.7  | .4   | .3   | .2    | 29.7  | 70.3               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL |
|-------|------|-------|-----|-----|------|------|-------|
| (GMT) |      |       |     |     |      |      | OBS   |
| 00003 | .0   | .1    | .3  | .8  | 15.3 | 83.4 | 711   |
| 06009 | .1   | .4    | .6  | 1.6 | 18.3 | 79.0 | 816   |
| 12015 | .1   | .4    | .1  | 1.3 | 11.9 | 86.1 | 822   |
| 18021 | .0   | .3    | .7  | 2.0 | 15.8 | 81.2 | 860   |
| TOT   | 2    | 10    | 14  | 47  | 492  | 2644 | 3209  |
| PCT   | .1   | .3    | .4  | 1.5 | 15.3 | 82.4 | 100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HR    | <150  | <600 | <1000 | 1000+  | NH <5/8<br>AND 5+ | TOTAL |
|-------|-------|------|-------|--------|-------------------|-------|
| (GMT) | <50YD | <1   | <5    | AND 5+ | AND 5+            | OBS   |
| 00003 | .2    | 1.6  | 9.2   | 18.6   | 72.2              | 489   |
| 06009 | .6    | 2.7  | 11.5  | 24.0   | 64.5              | 512   |
| 12015 | .2    | 1.7  | 8.3   | 23.6   | 68.1              | 605   |
| 18021 | .5    | 1.4  | 7.7   | 21.0   | 71.3              | 572   |
| TOT   | 8     | 40   | 198   | 477    | 1503              | 2178  |
| PCT   | .4    | 1.8  | 9.1   | 21.9   | 69.0              | 100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL | PCT   |
|--------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
|        |      |       |       |       |       |       |       |        | OBS   | FREQ  |
| 85/89  | .0   | .0    | *     | .0    | *     | .0    | .0    | .0     | 2     | .1    |
| 80/84  | .0   | *     | .2    | .3    | .6    | .6    | .5    | .1     | 52    | 2.3   |
| 75/79  | .0   | .0    | *     | .7    | 2.3   | 6.1   | 6.4   | 1.7    | 386   | 17.2  |
| 70/74  | .0   | .0    | .1    | 1.2   | 7.7   | 15.5  | 21.3  | 14.5   | 1346  | 59.9  |
| 65/69  | .0   | .0    | .0    | 1.2   | 4.0   | 5.4   | 5.1   | 3.3    | 429   | 19.1  |
| 60/64  | .0   | .0    | .0    | .0    | .3    | .1    | .3    | .5     | 27    | 1.2   |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | .1     | 4     | .2    |
| TOTAL  | 0    | 1     | 8     | 68    | 338   | 624   | 754   | 453    | 2246  | 100.0 |
| PCT    | .0   | *     | .4    | 3.0   | 15.0  | 27.8  | 33.6  | 20.2   |       |       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM |
|------|-----|-----|-----|------|------|------|------|-----|------|
| 0.0  | *   | .0  | .0  | .0   | .0   | *    | .0   | .0  | .0   |
| .2   | .3  | .2  | .1  | .2   | .4   | .6   | .3   | .0  | *    |
| 1.0  | .9  | 1.3 | 1.4 | 3.1  | 4.9  | 3.0  | 1.2  | .0  | .5   |
| 6.0  | 5.7 | 5.2 | 5.2 | 6.9  | 11.4 | 10.8 | 7.0  | .0  | 1.6  |
| 4.7  | 2.5 | 1.7 | .5  | .6   | .9   | 2.7  | 5.0  | .0  | .4   |
| .2   | .1  | *   | .1  | *    | *    | .2   | .5   | .0  | .0   |
| .0   | .0  | *   | *   | .0   | .0   | *    | .1   | .0  | .0   |
| 12.1 | 9.6 | 8.4 | 7.3 | 10.9 | 17.6 | 17.4 | 14.0 | .0  | 2.6  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL |
|-------|-----|-----|-----|-----|----|----|-----|------|-------|
| (GMT) |     |     |     |     |    |    |     |      | OBS   |
| 00003 | 82  | 76  | 75  | 71  | 66 | 63 | 58  | 70.9 | 813   |
| 06009 | 87  | 77  | 74  | 71  | 66 | 64 | 58  | 70.5 | 1022  |
| 12015 | 86  | 82  | 80  | 73  | 68 | 65 | 58  | 73.2 | 908   |
| 18021 | 86  | 82  | 78  | 73  | 67 | 64 | 58  | 72.8 | 1043  |
| TOT   | 87  | 81  | 77  | 72  | 67 | 64 | 58  | 71.9 | 3786  |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR  | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL |
|-------|------|-------|-------|-------|-------|--------|------|-------|
| (GMT) |      |       |       |       |       |        |      | OBS   |
| 00003 | .0   | 1.3   | 11.2  | 22.4  | 38.1  | 27.1   | 82   | 536   |
| 06009 | .0   | 1.3   | 10.7  | 24.2  | 35.8  | 28.1   | 82   | 559   |
| 12015 | .0   | 4.7   | 19.1  | 31.4  | 30.1  | 14.6   | 78   | 611   |
| 18021 | .0   | 6.0   | 18.9  | 33.2  | 30.3  | 11.6   | 77   | 597   |
| TOT   | 0    | 79    | 350   | 645   | 769   | 460    | 80   | 2303  |

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | .0       | .2       | *        | 8     | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .2       | .3       | .0       | 12    | .0       | .5        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .8       | .3       | .0       | 33    | .0       | 1.4       |
| 6                  | .0       | .0       | .0       | .0       | .2       | .5       | .1       | .0       | 22    | .0       | .9        |
| 5                  | .0       | .0       | .0       | .1       | .8       | 1.0      | .1       | .0       | 50    | .0       | 2.1       |
| 4                  | .0       | .0       | .0       | .1       | 1.7      | 1.2      | .1       | .0       | 75    | .0       | 3.1       |
| 3                  | .0       | *        | *        | .5       | 3.1      | .8       | *        | .0       | 111   | .0       | 4.6       |
| 2                  | .0       | .0       | .2       | 1.6      | 5.2      | 1.0      | .0       | .0       | 190   | .0       | 7.9       |
| 1                  | .0       | .0       | .1       | 3.1      | 7.9      | .5       | .0       | .0       | 278   | *        | 11.5      |
| 0                  | .0       | .0       | .5       | 7.9      | 7.4      | .3       | .0       | .0       | 386   | .0       | 16.0      |
| -1                 | .0       | .0       | 1.0      | 8.8      | 4.3      | .1       | .0       | .0       | 341   | .1       | 14.1      |
| -2                 | *        | .0       | 2.2      | 8.2      | 2.5      | *        | .0       | .0       | 313   | *        | 13.0      |
| -3                 | .2       | *        | 2.5      | 5.2      | .7       | .0       | .0       | .0       | 209   | .0       | 8.7       |
| -4                 | .0       | .0       | 2.6      | 3.8      | .4       | .0       | .0       | .0       | 164   | .0       | 6.8       |
| -5                 | .0       | .2       | 2.0      | 1.8      | .3       | .0       | .0       | .0       | 103   | .0       | 4.3       |
| -6                 | *        | .2       | 1.1      | .7       | .1       | .0       | .0       | .0       | 53    | .0       | 2.2       |
| -7/-8              | .0       | .3       | .7       | .5       | *        | .0       | .0       | .0       | 39    | *        | 1.6       |
| -9/-10             | .0       | .2       | .3       | .1       | .0       | .0       | .0       | .0       | 14    | .0       | .6        |
| -11/-13            | .0       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .2        |
| TOTAL              | 6        | 26       | 316      | 1023     | 844      | 158      | 31       | 2        | 2406  | 5        | 2401      |
| PCT                | .2       | 1.1      | 13.1     | 42.5     | 35.1     | 6.6      | 1.3      | .1       | 100.0 | .2       | 99.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | .2   | .1    | .0    | .0    | .0  | .5   | .7  | .4   | .0    | .0    | .0    | .0  | 1.1  |
| 1-2     | .1  | 2.8  | .7    | .0    | .0    | .0  | 3.6  | .3  | 2.9  | 1.1   | .0    | .0    | .0  | 4.4  |
| 3-4     | .0  | 1.2  | 2.1   | .0    | .0    | .0  | 3.3  | .1  | 1.8  | 1.4   | .0    | .0    | .0  | 3.3  |
| 5-6     | .0  | .8   | 1.4   | .6    | .0    | .0  | 2.8  | .0  | .5   | .7    | .2    | .0    | .0  | 1.4  |
| 7       | .0  | .1   | .6    | .3    | .0    | .0  | 1.0  | .0  | .0   | *     | *     | .0    | .0  | .1   |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | *     | .0  | *    |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 5.1  | 5.0   | 1.1   | .0    | .0  | 11.5 | 1.1 | 5.6  | 3.2   | .3    | *     | .0  | 10.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .8  | .6   | .1    | .0    | .0    | .0  | 1.5 | .5  | 1.2  | .0    | .0    | .0    | .0  | 1.7 |
| 1-2     | .3  | 2.8  | .4    | .0    | .0    | .0  | 3.4 | .2  | 2.1  | .3    | .0    | .0    | .0  | 2.6 |
| 3-4     | .0  | 1.8  | 1.3   | .0    | .0    | .0  | 3.1 | .0  | .9   | 1.4   | .0    | .0    | .0  | 2.3 |
| 5-6     | .0  | .0   | 1.0   | .2    | .0    | .0  | 1.2 | .0  | .0   | .4    | .0    | .0    | .0  | .4  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 1.0 | 5.2  | 2.8   | .2    | .1    | .0  | 9.3 | .6  | 4.2  | 2.3   | .2    | .0    | .0  | 7.4 |



PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER

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38.1N 26.7W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | 1.0  | .0    | .0    | .0    | .0  | 1.2 | .2  | 1.1  | .0    | .0    | .0    | .0  | 1.3  |
| 1-2     | .2  | 1.7  | .7    | .0    | .0    | .0  | 2.6 | .5  | 3.0  | 2.0   | .0    | .0    | .0  | 5.4  |
| 3-4     | .0  | 2.0  | 1.2   | .2    | .0    | .0  | 3.4 | .0  | 1.5  | 4.6   | .1    | .0    | .0  | 6.2  |
| 5-6     | .0  | .7   | .8    | .2    | .0    | .0  | 1.7 | .0  | .2   | 2.6   | .6    | .0    | .0  | 3.3  |
| 7       | .0  | .0   | .3    | .2    | .0    | .0  | .4  | .0  | .2   | .7    | .3    | .0    | .0  | 1.1  |
| 8-9     | .0  | .0   | .3    | .2    | .0    | .0  | .5  | .0  | .0   | .1    | .4    | .1    | .0  | .6   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 5.4  | 3.3   | .8    | .0    | .0  | 9.8 | .7  | 5.9  | 10.1  | 1.7   | .1    | .0  | 18.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .3  | 1.1  | .0    | .0    | .0    | .0  | 1.4  | .3  | .8   | .1    | .0    | .0    | .0  | 1.3  |           |
| 1-2     | .4  | 4.2  | 1.5   | .0    | .0    | .0  | 6.1  | .3  | 2.0  | .6    | .0    | .0    | .0  | 3.0  |           |
| 3-4     | .1  | 2.1  | 2.1   | .1    | .0    | .0  | 4.4  | .0  | 1.0  | 2.4   | .2    | .0    | .0  | 3.7  |           |
| 5-6     | .0  | .5   | 2.9   | .3    | .0    | .0  | 3.7  | .0  | .8   | 1.6   | .2    | .0    | .0  | 2.7  |           |
| 7       | .0  | .2   | 1.1   | .1    | .0    | .0  | 1.3  | .0  | .0   | 1.2   | .1    | .0    | .0  | 1.3  |           |
| 8-9     | .0  | .0   | .1    | .2    | .0    | .0  | .3   | .0  | .0   | .6    | .1    | .0    | .0  | .8   |           |
| 10-11   | .0  | .0   | .1    | .2    | .1    | .0  | .3   | .0  | .0   | .2    | .3    | .0    | .0  | .5   |           |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |           |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .8  | 8.1  | 8.0   | .9    | .1    | .0  | 17.9 | .7  | 4.7  | 6.7   | 1.2   | .0    | .0  | 13.3 | 97.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.1 | 6.5  | .3    | .0    | .0    | .0  | 13.0  |         |
| 1-2     | 2.4 | 21.3 | 7.1   | .0    | .0    | .0  | 30.8  |         |
| 3-4     | .2  | 12.2 | 16.4  | .6    | .0    | .0  | 29.5  |         |
| 5-6     | .0  | 3.4  | 11.2  | 2.3   | .0    | .0  | 16.9  |         |
| 7       | .0  | .4   | 3.9   | 1.1   | .0    | .0  | 5.4   |         |
| 8-9     | .0  | .0   | 1.3   | 1.0   | .1    | .0  | 2.3   |         |
| 10-11   | .0  | .0   | .3    | .8    | .1    | .0  | 1.3   |         |
| 12      | .0  | .0   | .2    | .3    | .0    | .0  | .5    |         |
| 13-16   | .0  | .0   | .1    | .1    | .1    | .0  | .3    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.8 | 43.9 | 40.8  | 6.2   | .3    | .0  | 100.0 | 947     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 3.0 | 12.8 | 13.8 | 6.1  | 1.4  | .8  | .3    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 700   | 3        |
| 6-7          | .1  | 2.0  | 7.5  | 7.8  | 5.0  | 1.8 | .6    | .6  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 468   | 5        |
| 8-9          | .0  | .7   | 2.2  | 4.0  | 2.4  | 2.0 | 1.3   | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 240   | 6        |
| 10-11        | .0  | .5   | .5   | .9   | 1.0  | 1.4 | .9    | .4  | .3    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 116   | 8        |
| 12-13        | .0  | .0   | .4   | .3   | .4   | .3  | .2    | .3  | .3    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 42    | 9        |
| >13          | .0  | .0   | .0   | .3   | .4   | .1  | .0    | .0  | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 18    | 8        |
| INDET        | 3.6 | 2.1  | 3.3  | 2.1  | 1.1  | .6  | .4    | .1  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 245   | 3        |
| TOTAL        | 122 | 331  | 508  | 395  | 214  | 128 | 67    | 32  | 23    | 7     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 1829  | 4        |
| PCT          | 6.7 | 18.1 | 27.8 | 21.6 | 11.7 | 7.0 | 3.7   | 1.7 | 1.3   | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1859-1972

OCTOBER

AREA 0001 AZORES  
38.0N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | 1.5                | 2.0       | 1.6  | .0        | .0   | .0              | .0   | 5.1                     | 4.0            | .0        | 1.0         | .0                  | .0         | .0              | 89.9       |
| NE       | .7                 | .7        | 1.8  | .0        | .0   | .0              | .0   | 3.2                     | 4.7            | .1        | .8          | .0                  | .4         | .0              | 90.9       |
| E        | 2.9                | 2.3       | 2.2  | .0        | .0   | .0              | .0   | 7.1                     | 4.9            | .3        | .0          | .0                  | 2.4        | .4              | 85.0       |
| SE       | 2.9                | 1.3       | 2.9  | .0        | .0   | .0              | .0   | 6.5                     | 6.6            | .1        | 1.1         | .0                  | .0         | .0              | 89.8       |
| S        | 2.1                | 1.3       | 2.1  | .0        | .0   | .0              | .0   | 5.5                     | 3.0            | .5        | 1.3         | .0                  | .7         | .0              | 89.0       |
| SW       | 3.1                | 3.3       | 1.0  | .0        | .0   | .0              | .0   | 7.4                     | 5.7            | 1.1       | 1.8         | .0                  | .5         | .3              | 83.3       |
| W        | 1.7                | 3.3       | 1.3  | .0        | .0   | .0              | .0   | 6.3                     | 5.9            | .7        | .6          | .0                  | .2         | .0              | 86.3       |
| NW       | 1.4                | 2.2       | .7   | .0        | .0   | .0              | .0   | 4.1                     | 5.0            | .0        | .2          | .0                  | .2         | .0              | 90.4       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | 5.6                | .0        | .0   | .0        | .0   | .0              | .0   | 5.6                     | .0             | .0        | 2.8         | .0                  | .0         | .0              | 91.7       |
| TOT PCT  | 2.1                | 2.2       | 1.5  | .0        | .0   | .0              | .0   | 5.6                     | 4.9            | .4        | .9          | .0                  | .5         | .1              | 87.6       |
| TOT OBS: | 2623               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | 2.1                | 1.9       | 1.5  | .0        | .0   | .0              | .0   | 5.5                     | 6.3            | .6        | .5          | .0                  | .3         | .0              | 86.8       |
| 06009      | 1.8                | 2.0       | 1.2  | .0        | .0   | .0              | .0   | 4.9                     | 5.7            | .8        | 1.4         | .0                  | .5         | .0              | 86.7       |
| 12015      | 1.7                | 2.7       | 1.6  | .0        | .0   | .0              | .0   | 5.8                     | 3.7            | .0        | .9          | .0                  | .4         | .3              | 88.9       |
| 18021      | 2.7                | 1.9       | 1.9  | .0        | .0   | .0              | .0   | 6.3                     | 3.9            | .1        | .7          | .0                  | .7         | .0              | 88.2       |
| TOT PCT    | 2.1                | 2.1       | 1.5  | .0        | .0   | .0              | .0   | 5.7                     | 4.8            | .4        | .9          | .0                  | .5         | .1              | 87.7       |
| TOT OBS:   | 2665               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .6                 | 4.8  | 7.0   | 2.1   | .2    | *   |      |       | 14.8      | 14.2     |          | 13.5       | 15.9  | 14.9  | 19.0  | 13.1  | 14.9  | 15.0  | 15.8  |
| NE       | .3                 | 4.0  | 4.9   | 1.2   | *     | *   |      |       | 10.4      | 13.1     |          | 9.2        | 10.8  | 11.7  | 11.9  | 9.9   | 10.3  | 9.7   | 11.2  |
| E        | .6                 | 3.7  | 4.1   | .8    | .1    | .0  |      |       | 9.3       | 12.7     |          | 7.7        | 10.5  | 8.1   | 8.1   | 11.2  | 9.9   | 10.3  | 8.8   |
| SE       | .3                 | 2.9  | 3.7   | 1.0   | .1    | .0  |      |       | 8.0       | 13.9     |          | 6.9        | 8.6   | 7.5   | 7.5   | 7.2   | 10.0  | 8.7   | 9.9   |
| S        | .5                 | 4.2  | 5.2   | 1.3   | .2    | .0  |      |       | 11.5      | 13.5     |          | 11.9       | 10.8  | 11.1  | 9.1   | 12.7  | 10.9  | 12.0  | 11.7  |
| SW       | .7                 | 5.1  | 6.0   | 2.4   | .2    | .0  |      |       | 14.4      | 14.2     |          | 15.1       | 12.9  | 15.1  | 14.9  | 14.1  | 16.3  | 13.9  | 11.7  |
| W        | .6                 | 4.5  | 6.4   | 2.5   | .3    | .0  |      |       | 14.4      | 14.9     |          | 16.2       | 11.9  | 14.8  | 14.6  | 15.2  | 11.8  | 13.8  | 14.3  |
| NW       | .5                 | 4.8  | 6.8   | 2.8   | .2    | *   |      |       | 15.0      | 14.8     |          | 17.5       | 15.9  | 14.1  | 13.3  | 15.0  | 14.1  | 15.0  | 14.0  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |       |     |      |       | 2.0       | .0       |          | 2.1        | 2.8   | 2.6   | 1.8   | 1.5   | 1.8   | 1.4   | 2.6   |
| TOT OBS  | 255                | 1404 | 1831  | 585   | 62    | 3   | 4140 |       | 13.8      |          |          | 653        | 251   | 835   | 281   | 679   | 274   | 898   | 269   |
| TOT PCT  | 6.2                | 33.9 | 44.2  | 14.1  | 1.5   | .1  |      | 100.0 |           |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |      |           |          |          | 00         | 06    | 12    | 18    |
| N        | 2.5                | 7.2  | 4.3   | .8    | .1  |      |           |          |          | 14.2       | 15.9  | 13.6  | 15.2  |
| NE       | 1.6                | 5.9  | 2.4   | .3    | *   |      |           |          |          | 10.4       | 13.1  | 9.6   | 11.7  |
| E        | 1.9                | 5.0  | 2.1   | .3    | .0  |      |           |          |          | 9.3        | 12.7  | 8.4   | 8.1   |
| SE       | 1.3                | 4.1  | 2.2   | .4    | *   |      |           |          |          | 8.0        | 13.9  | 7.4   | 7.5   |
| S        | 2.2                | 5.9  | 2.8   | .6    | .1  |      |           |          |          | 11.5       | 13.5  | 11.6  | 10.6  |
| SW       | 2.3                | 7.1  | 4.1   | 1.0   | *   |      |           |          |          | 14.4       | 14.2  | 14.5  | 15.1  |
| W        | 2.2                | 6.5  | 4.8   | .9    | .1  |      |           |          |          | 14.4       | 14.9  | 15.0  | 14.7  |
| NW       | 2.3                | 7.0  | 4.8   | 1.0   | *   |      |           |          |          | 15.0       | 14.8  | 17.1  | 13.9  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      |           |          |          | .0         | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |     |      |           |          |          | 2.0        | .0    | 2.3   | 2.4   |
| TOT OBS  | 752                | 2016 | 1139  | 219   | 14  | 4140 |           |          |          | 13.8       |       | 904   | 1116  |
| TOT PCT  | 18.2               | 48.7 | 27.5  | 5.3   | .3  |      | 100.0     |          |          |            | 100.0 | 100.0 | 100.0 |

OCTOBER

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972AREA 0001 AZORES  
38.0N 26.7W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00003 | 2.3  | 5.1 | 34.4 | 43.5  | 12.9  | 1.7   | .1  | 13.3  | 100.0    | 904       |
| 00009 | 2.4  | 4.7 | 34.5 | 43.6  | 14.0  | 1.8   | .0  | 13.4  | 100.0    | 1116      |
| 12015 | 1.6  | 3.7 | 30.0 | 48.4  | 14.4  | 1.9   | .1  | 14.3  | 100.0    | 953       |
| 18021 | 1.7  | 3.3 | 36.2 | 42.0  | 15.0  | 1.7   | .1  | 13.9  | 100.0    | 1167      |
| TOT   | 83   | 172 | 1404 | 1831  | 585   | 62    | 3   | 13.8  |          | 4140      |
| PCT   | 2.0  | 4.2 | 33.9 | 44.2  | 14.1  | 1.5   | .1  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|--------|-----------|------------------|
| N        | 2.3  | 3.3  | 4.9  | 2.7    |           | 5.1              |
| NE       | 1.8  | 2.3  | 3.8  | 2.0    |           | 5.0              |
| E        | 1.3  | 1.9  | 4.5  | 2.4    |           | 5.4              |
| SE       | 1.5  | 1.3  | 2.7  | 2.0    |           | 5.1              |
| S        | 2.5  | 2.6  | 4.6  | 2.4    |           | 4.8              |
| SW       | 2.8  | 2.9  | 5.1  | 3.5    |           | 5.1              |
| W        | 3.7  | 3.3  | 5.7  | 3.2    |           | 4.8              |
| NW       | 2.7  | 4.4  | 6.1  | 2.6    |           | 4.8              |
| VAR      | .0   | .0   | .0   | .0     |           | .0               |
| CALM     | .6   | .3   | .2   | .2     |           | 3.5              |
| TOT OBS  | 417  | 483  | 817  | 455    | 2172      | 5.0              |
| TOT PCT  | 19.2 | 22.2 | 37.6 | 20.9   | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|----------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT  | OBS   |
| *   | .0  | .2  | 1.4 | 1.9  | 1.3  | .5   | .1   | .0   | .0    | 7.7      |       |
| .0  | *   | .1  | .8  | 2.3  | .9   | .3   | *    | .0   | .0    | 5.5      |       |
| *   | *   | .6  | 1.0 | 1.6  | 1.1  | .5   | .0   | .0   | .0    | 5.1      |       |
| *   | .0  | .3  | 1.0 | 1.1  | .8   | .2   | *    | *    | *     | 3.9      |       |
| *   | .0  | .3  | .9  | 1.5  | 1.3  | .2   | .1   | *    | .1    | 7.6      |       |
| .1  | *   | .5  | 1.8 | 2.1  | 1.1  | .3   | .1   | *    | .1    | 8.1      |       |
| .1  | .1  | .2  | 1.3 | 3.0  | 1.2  | .4   | .1   | .1   | .1    | 9.3      |       |
| *   | *   | .4  | 1.0 | 2.9  | 1.9  | .4   | *    | *    | .0    | 9.1      |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0       |       |
| .1  | .0  | *   | *   | .1   | *    | *    | .0   | .0   | .0    | 1.1      |       |
| 11  | 4   | 59  | 202 | 355  | 209  | 61   | 15   | 4    | 9     | 1243     | 2172  |
| .5  | .2  | 2.7 | 9.3 | 16.3 | 9.6  | 2.8  | .7   | .2   | .4    | 57.2     | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NH)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM) = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|-------------------|-----------|-----------|------------|---------|
| = OR >6500     | .4       | .6      | .6      | .6                | .6        | .6        | .6         | .6      |
| = OR >5000     | .9       | 1.3     | 1.3     | 1.3               | 1.3       | 1.3       | 1.3        | 1.3     |
| = OR >3500     | 3.2      | 4.1     | 4.1     | 4.1               | 4.1       | 4.1       | 4.1        | 4.1     |
| = OR >2000     | 10.8     | 13.4    | 13.6    | 13.7              | 13.7      | 13.7      | 13.7       | 13.7    |
| = OR >1000     | 23.4     | 29.4    | 29.7    | 29.9              | 29.9      | 29.9      | 29.9       | 29.9    |
| = OR >600      | 29.7     | 37.8    | 39.1    | 39.2              | 39.2      | 39.2      | 39.2       | 39.2    |
| = OR >300      | 31.0     | 40.0    | 41.6    | 41.9              | 41.9      | 41.9      | 41.9       | 41.9    |
| = OR >150      | 31.0     | 40.2    | 41.8    | 42.0              | 42.0      | 42.1      | 42.1       | 42.1    |
| = OR >0        | 31.1     | 40.4    | 42.2    | 42.4              | 42.4      | 42.5      | 42.5       | 42.5    |
| TOTAL          | 681      | 887     | 925     | 930               | 930       | 932       | 932        | 933     |

TOTAL NUMBER OF OBS: 2193

PCT FREQ NH &lt; 5/8: 57.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4    | 5   | 6    | 7   | 8    | OBSCD | TOTAL OBS |
|-----|-----|------|------|------|-----|------|-----|------|-------|-----------|
| 6.5 | 9.6 | 14.6 | 14.4 | 12.1 | 7.6 | 11.1 | 9.4 | 14.5 | .3    | 2343      |



PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972

OCTOBER

AREA 0001 AZORES  
38.0N 26.7W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|-----|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0  | .0  | .0  | .0   | *    | .0   | .0   | .0  | .0   | *     | .1           |
|              | NO PCP | .0   | .0  | *   | .0  | .0   | .0   | .0   | .0   | .0  | *    | .1    |              |
|              | TOT %  | .0   | .0  | *   | .0  | .0   | .0   | .0   | .0   | .0  | *    | .1    |              |
| 1/2<1        | PCP    | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    | .3           |
|              | NO PCP | .0   | .0  | .0  | .0  | .2   | .1   | *    | *    | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0  | .0  | .0  | .2   | .1   | *    | *    | .0  | .0   | .0    |              |
| 1<2          | PCP    | .0   | .0  | .0  | *   | *    | .1   | *    | .0   | .0  | .0   | .2    | .1           |
|              | NO PCP | .0   | .0  | .0  | .0  | .0   | *    | *    | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0  | .0  | *   | *    | .1   | .1   | .0   | .0  | .0   | .3    |              |
| 2<5          | PCP    | .1   | .1  | .2  | .1  | .1   | .2   | .2   | .1   | .0  | .0   | 1.0   | 1.4          |
|              | NO PCP | .2   | .2  | .2  | .1  | .2   | .3   | .1   | .1   | .0  | .0   | .0    |              |
|              | TOT %  | .3   | .3  | .4  | .2  | .2   | .5   | .3   | .2   | .0  | .0   | 2.4   |              |
| 5<10         | PCP    | .2   | .1  | .4  | .2  | .3   | .6   | .6   | .4   | .0  | *    | 2.9   | 14.5         |
|              | NO PCP | 2.2  | 1.1 | 1.7 | 1.3 | 1.2  | 2.5  | 2.4  | 2.1  | .0  | .1   | .0    |              |
|              | TOT %  | 2.4  | 1.2 | 2.1 | 1.6 | 1.5  | 3.1  | 3.0  | 2.5  | .0  | .1   | 17.5  |              |
| 10+          | PCP    | .3   | .1  | .1  | .1  | .2   | .2   | .2   | .2   | .0  | .0   | 1.4   | 78.1         |
|              | NO PCP | 10.5 | 8.0 | 7.1 | 5.4 | 9.3  | 10.9 | 12.4 | 13.3 | .0  | 1.2  | .0    |              |
|              | TOT %  | 10.8 | 8.1 | 7.2 | 5.5 | 9.5  | 11.1 | 12.6 | 13.5 | .0  | 1.2  | 79.4  |              |
| TOT OBS      |        | 2612 |     |     |     |      |      |      |      |     |      |       |              |
| TOT PCT      |        | 13.6 | 9.6 | 9.7 | 7.3 | 11.4 | 14.9 | 16.0 | 16.2 | .0  | 1.3  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | *   | .0  | .0   | .0   | .0   | .0   | .0  | *    | .1    | .            |
|              | 4-10       | .0   | .0   | .0  | .0  | *    | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0   | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | *   | .0  | *    | *    | .0   | .0   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | 4-10       | .0   | .0   | .0  | .0  | *    | *    | *    | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .1   | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0  | .0  | .1   | .1   | *    | *    | .0  | .0   | .2    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    | .4           |
|              | 4-10       | .0   | .0   | .0  | .0  | *    | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0  | .1  | .0   | .1   | *    | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0   | *   | .1  | *    | *    | *    | .0   | .0  | .0   | .2    |              |
|              | TOT %      | .0   | .0   | *   | .1  | .1   | .1   | .1   | .0   | .0  | .0   | .4    |              |
| 2<5          | 0-3        | *    | *    | .0  | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .1    | 1.7          |
|              | 4-10       | .1   | .2   | .1  | .1  | *    | .1   | .1   | .1   | .0  | .0   | .0    |              |
|              | 11-21      | .2   | .2   | .1  | *   | .2   | .2   | .3   | .1   | .0  | .0   | 1.2   |              |
|              | 22+        | .2   | *    | .2  | .1  | .2   | .3   | *    | .1   | .0  | .0   | 1.0   |              |
|              | TOT %      | .5   | .4   | .4  | .3  | .4   | .5   | .4   | .2   | .0  | .0   | 3.0   |              |
| 5<10         | 0-3        | .1   | .0   | *   | *   | .1   | .1   | .1   | .1   | .0  | .2   | .7    | 18.4         |
|              | 4-10       | .8   | .5   | .6  | .5  | .4   | .7   | .8   | .8   | .0  | .0   | 5.2   |              |
|              | 11-21      | 1.4  | .8   | 1.0 | .9  | .8   | 1.2  | .9   | 1.1  | .0  | .0   | 8.0   |              |
|              | 22+        | .6   | .4   | .3  | .3  | .4   | .8   | 1.0  | .6   | .0  | .0   | 4.5   |              |
|              | TOT %      | 2.8  | 1.7  | 2.0 | 1.7 | 1.7  | 2.9  | 2.9  | 2.5  | .0  | .2   | 18.4  |              |
| 10+          | 0-3        | .4   | .3   | .4  | .2  | .4   | .5   | .5   | .5   | .0  | 1.5  | 4.8   | 77.8         |
|              | 4-10       | 4.0  | 3.4  | 3.0 | 2.0 | 3.3  | 3.7  | 3.6  | 4.0  | .0  | .0   | 26.9  |              |
|              | 11-21      | 5.6  | 4.0  | 3.3 | 2.9 | 4.5  | 4.6  | 5.7  | 6.0  | .0  | .0   | 36.6  |              |
|              | 22+        | 1.2  | .8   | .5  | .4  | .8   | 1.7  | 2.0  | 2.1  | .0  | .0   | 9.5   |              |
|              | TOT %      | 11.2 | 8.4  | 7.2 | 5.5 | 9.1  | 10.5 | 11.7 | 12.7 | .0  | 1.5  | 77.8  |              |
| TOT OBS      |            | 3291 |      |     |     |      |      |      |      |     |      |       |              |
| TOT PCT      |            | 14.5 | 10.5 | 9.6 | 7.6 | 11.3 | 14.2 | 15.1 | 15.4 | .0  | 1.8  | 100.0 |              |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972

OCTOBER

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38.0N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|------|------|------|------|------|------|-------|-------|--------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                    |              |
| 00003 | .7  | .4  | 2.1 | 7.8  | 15.1 | 9.0  | 1.9  | .4   | .0   | .2    | 37.5  | 62.5               | 536          |
| 06009 | 1.0 | .2  | 3.3 | 10.1 | 15.9 | 9.5  | 2.5  | .8   | .0   | 1.0   | 44.2  | 55.8               | 516          |
| 12015 | .3  | .0  | 1.9 | 8.8  | 17.7 | 9.4  | 4.0  | .8   | .3   | .2    | 43.4  | 56.6               | 627          |
| 18021 | .0  | .2  | 3.2 | 9.3  | 14.5 | 9.3  | 2.3  | .8   | .3   | .3    | 40.2  | 59.8               | 602          |
| TOT   | 11  | 4   | 59  | 205  | 361  | 212  | 62   | 16   | 4    | 9     | 943   | 1338               | 2281         |
| PCT   | .5  | .2  | 2.6 | 9.0  | 15.8 | 9.3  | 2.7  | .7   | .2   | .4    | 41.3  | 58.7               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSAY (NH) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL |
|-------|------|-------|-----|-----|------|------|-------|
| (GMT) |      |       |     |     |      |      | OBS   |
| 00003 | .1   | .1    | .5  | 3.1 | 19.1 | 77.0 | 773   |
| 06009 | .0   | .4    | .4  | 3.1 | 18.6 | 77.6 | 840   |
| 12015 | .2   | .4    | .2  | 2.2 | 15.9 | 81.0 | 828   |
| 18021 | .1   | .1    | .4  | 3.5 | 19.9 | 75.9 | 893   |
| TOT   | 4    | 8     | 13  | 99  | 614  | 2596 | 3334  |
| PCT   | .1   | .2    | .4  | 3.0 | 18.4 | 77.9 | 100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSAY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HR    | <150  | <600 | <1000 | 1000+  | NH <5/8<br>AND 5+ | TOTAL |
|-------|-------|------|-------|--------|-------------------|-------|
| (GMT) | <5000 | <1   | <5    | AND 5+ |                   | OBS   |
| 00003 | .8    | 3.4  | 12.5  | 27.5   | 60.0              | 505   |
| 06009 | .8    | 4.5  | 15.6  | 29.8   | 54.7              | 494   |
| 12015 | .3    | 2.3  | 11.9  | 32.6   | 55.5              | 611   |
| 18021 | .0    | 3.4  | 13.7  | 27.4   | 58.8              | 583   |
| TOT   | 10    | 73   | 293   | 645    | 1255              | 2193  |
| PCT   | .5    | 3.3  | 13.4  | 29.4   | 57.2              | 100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL | PCT   |
|--------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
|        |      |       |       |       |       |       |       |        | OBS   | FREQ  |
| 80/84  | .0   | .0    | *     | *     | .1    | .1    | .0    | .0     | 6     | .3    |
| 75/79  | .0   | .0    | .0    | .1    | .2    | .7    | .9    | .4     | 51    | 2.3   |
| 70/74  | .0   | .1    | .1    | .6    | 3.2   | 7.7   | 12.9  | 9.4    | 750   | 34.0  |
| 65/69  | .0   | .0    | .1    | 2.3   | 7.8   | 12.7  | 16.5  | 11.0   | 1112  | 50.4  |
| 60/64  | .0   | .0    | .1    | .6    | 4.2   | 3.6   | 2.4   | 1.9    | 284   | 12.9  |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .1    | .0    | *      | 3     | .1    |
| TOTAL  | 0    | 2     | 8     | 82    | 341   | 550   | 721   | 502    | 2206  | 100.0 |
| PCT    | .0   | .1    | .4    | 3.7   | 15.5  | 24.9  | 32.7  | 22.8   |       |       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE  | E    | SE  | S    | SW   | W    | NW   | VAR | CALM |
|------|-----|------|-----|------|------|------|------|-----|------|
|      |     |      |     |      |      |      |      |     |      |
| .1   | .1  | *    | *   | .1   | .0   | .0   | *    | .0  | .0   |
| *    | .2  | .2   | .2  | .4   | .5   | .5   | .3   | .0  | *    |
| 2.4  | 1.9 | 3.4  | 2.8 | 5.9  | 7.5  | 6.5  | 3.2  | .0  | .4   |
| 8.0  | 5.8 | 5.1  | 3.7 | 4.4  | 5.7  | 7.3  | 9.6  | .0  | .8   |
| 3.6  | 1.7 | 1.3  | .4  | .2   | .6   | 1.3  | 3.6  | .0  | .1   |
| *    | .0  | .0   | *   | *    | .0   | .0   | *    | .0  | .0   |
| 14.1 | 9.7 | 10.0 | 7.1 | 11.1 | 14.3 | 15.6 | 16.7 | .0  | 1.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL |
|-------|-----|-----|-----|-----|----|----|-----|------|-------|
| (GMT) |     |     |     |     |    |    |     |      | OBS   |
| 00003 | 78  | 74  | 72  | 68  | 63 | 60 | 56  | 67.6 | 893   |
| 06009 | 78  | 74  | 72  | 68  | 62 | 60 | 58  | 67.3 | 1103  |
| 12015 | 80  | 77  | 75  | 69  | 64 | 62 | 57  | 69.5 | 943   |
| 18021 | 84  | 76  | 74  | 69  | 63 | 61 | 59  | 68.9 | 1141  |
| TOT   | 84  | 76  | 74  | 68  | 63 | 61 | 56  | 68.3 | 4080  |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.3   | 14.2  | 24.4  | 34.6  | 24.6   | 81   | 529          |
| 06009         | .0   | 2.8   | 12.9  | 23.4  | 33.5  | 27.5   | 81   | 535          |
| 12015         | .0   | 7.0   | 16.5  | 26.6  | 32.2  | 17.7   | 78   | 587          |
| 18021         | .0   | 4.6   | 17.9  | 25.7  | 30.3  | 21.6   | 79   | 588          |
| TOT           | 0    | 95    | 346   | 561   | 729   | 508    | 80   | 2239         |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972

OCTOBER

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53 | 57 | 61   | 65   | 69   | 73   | 77 | 81 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----|----|------|------|------|------|----|----|-------|----------|-----------|
|                    | 56 | 60 | 64   | 68   | 72   | 76   | 80 | 84 |       |          |           |
| 14/16              | .0 | .0 | .0   | .0   | .0   | *    | .0 | .0 | 1     | .0       | *         |
| 11/13              | .0 | .0 | .0   | .0   | .0   | *    | *  | *  | 3     | .0       | .1        |
| 9/10               | .0 | .0 | .0   | .0   | *    | .1   | .1 | .0 | 7     | .0       | .3        |
| 7/8                | .0 | .0 | .0   | .1   | .1   | .3   | .1 | *  | 16    | .0       | .7        |
| 6                  | .0 | .0 | .0   | *    | .1   | .3   | .1 | .0 | 13    | .0       | .6        |
| 5                  | .0 | .0 | .0   | *    | .3   | .6   | .2 | .0 | 28    | .0       | 1.2       |
| 4                  | .0 | .0 | .0   | .1   | 1.3  | 1.0  | .2 | .0 | 61    | .0       | 2.6       |
| 3                  | .0 | .0 | .0   | .3   | 1.1  | 1.6  | *  | .0 | 72    | .0       | 3.0       |
| 2                  | .0 | .0 | .1   | 1.5  | 3.8  | 1.9  | *  | .0 | 172   | .0       | 7.3       |
| 1                  | .0 | .0 | .1   | 2.2  | 5.8  | 1.8  | .0 | .0 | 233   | .1       | 9.7       |
| 0                  | .0 | .0 | .3   | 5.3  | 7.8  | 1.6  | .0 | .0 | 354   | .2       | 14.8      |
| -1                 | .0 | .0 | .7   | 7.0  | 5.3  | .6   | .0 | .0 | 321   | .1       | 13.5      |
| -2                 | .0 | .0 | 1.7  | 7.9  | 3.7  | .4   | .0 | .0 | 325   | .1       | 13.7      |
| -3                 | .0 | .0 | 1.7  | 6.1  | 2.6  | *    | .0 | .0 | 247   | .1       | 10.4      |
| -4                 | .0 | .1 | 2.0  | 4.8  | .8   | .0   | .0 | .0 | 183   | .1       | 7.6       |
| -5                 | .0 | .1 | 2.1  | 2.8  | .6   | .1   | .0 | .0 | 135   | .1       | 5.6       |
| -6                 | *  | *  | 2.1  | 1.6  | .3   | .0   | .0 | .0 | 95    | *        | 4.0       |
| -7/-8              | .0 | .0 | 1.9  | .8   | .2   | .0   | .0 | .0 | 68    | *        | 2.8       |
| -9/-10             | .0 | .2 | .6   | .2   | .0   | .0   | .0 | .0 | 22    | .0       | .9        |
| -11/-13            | .0 | *  | .1   | .1   | .0   | .0   | .0 | .0 | 5     | .0       | .2        |
| TOTAL              | 1  | 10 | 313  | 964  | 802  | 249  | 20 | 2  | 2361  | 22       | 2339      |
| PCT                | *  | .4 | 13.3 | 40.8 | 34.0 | 10.5 | .8 | .1 | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1972

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
|         |     |      |       |       |       |     |      |     |      |       |       |       |     |     |
| <1      | .0  | .2   | .3    | .0    | .0    | .0  | .5   | .1  | .7   | *     | .0    | .0    | .0  | .8  |
| 1-2     | .1  | 2.0  | 1.8   | .0    | .0    | .0  | 4.0  | .0  | 1.6  | .6    | .0    | .0    | .0  | 2.3 |
| 3-4     | .0  | .8   | 2.7   | .5    | .0    | .0  | 3.9  | .0  | 1.0  | 1.5   | .2    | .0    | .0  | 2.7 |
| 5-6     | .0  | .2   | 2.5   | .6    | .0    | .0  | 3.4  | .0  | .5   | 1.3   | .5    | .0    | .0  | 2.3 |
| 7       | .0  | .1   | .9    | .8    | .0    | .0  | 1.8  | .0  | .0   | .9    | .3    | .0    | .0  | 1.2 |
| 8-9     | .1  | .0   | .1    | .1    | .0    | .0  | .3   | .0  | .0   | .2    | .1    | .0    | .0  | .3  |
| 10-11   | .0  | .0   | .1    | .1    | .2    | .0  | .4   | .0  | .0   | *     | .2    | .0    | .0  | .2  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 3.4  | 8.4   | 2.2   | .2    | .0  | 14.4 | .1  | 3.8  | 4.6   | 1.3   | .0    | .0  | 9.8 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         |     |      |       |       |       |     |     |     |      |       |       |       |     |     |
| <1      | .3  | .4   | .1    | .0    | .0    | .0  | .8  | .1  | .2   | .0    | .0    | .0    | .0  | .4  |
| 1-2     | .1  | 1.6  | .7    | .0    | .0    | .0  | 2.5 | .0  | .5   | .7    | .0    | .0    | .0  | 1.2 |
| 3-4     | .0  | .8   | 1.8   | .1    | .0    | .0  | 2.7 | .0  | .4   | .8    | .2    | .0    | .0  | 1.4 |
| 5-6     | .0  | .1   | 1.0   | .1    | .0    | .0  | 1.2 | .0  | .1   | .8    | .1    | .0    | .0  | 1.0 |
| 7       | .0  | .0   | .1    | .6    | .2    | .0  | .9  | .0  | .1   | .9    | .2    | .0    | .0  | 1.2 |
| 8-9     | .0  | .0   | .2    | .2    | .1    | .0  | .5  | .0  | .0   | .2    | .1    | *     | .0  | .3  |
| 10-11   | .0  | .0   | .1    | .2    | .0    | .0  | .3  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 12      | .0  | .0   | .1    | .0    | .1    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 2.8  | 4.1   | 1.3   | .5    | .0  | 9.2 | .1  | 1.3  | 3.3   | .8    | *     | .0  | 5.6 |



PERIOD: (OVER-ALL) 1963-1972

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .5  | .4   | .0    | .0    | .0    | .0  | .9   | .1  | .3   | .0    | .0    | .0    | .0  | .5   |
| 1-2     | .2  | 1.5  | 1.1   | .0    | .0    | .0  | 2.8  | .1  | 1.5  | 1.5   | .0    | .0    | .0  | 3.1  |
| 3-4     | .0  | .7   | 2.4   | .2    | .0    | .0  | 3.2  | .0  | 1.2  | 2.5   | .3    | .0    | .0  | 4.0  |
| 5-6     | .0  | .4   | 1.9   | .6    | .0    | .0  | 2.9  | .0  | .2   | 1.3   | .5    | .0    | .0  | 2.1  |
| 7       | .0  | .0   | .7    | .6    | .0    | .0  | 1.3  | .0  | .0   | 1.0   | .5    | .0    | .0  | 1.6  |
| 8-9     | .0  | .0   | .3    | .1    | .0    | .0  | .4   | .0  | .0   | .9    | .6    | .0    | .0  | 1.4  |
| 10-11   | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .4    | .2    | .0    | .0  | .7   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .2    | .0    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | .0    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 3.0  | 6.5   | 1.4   | .0    | .0  | 11.5 | .2  | 3.2  | 7.2   | 2.7   | .2    | .0  | 13.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3   | .2  | .3   | .0    | .0    | .0    | .0  | .6   |           |
| 1-2     | .3  | 2.8  | 1.9   | .0    | .0    | .0  | 5.0  | .2  | 2.8  | 1.5   | .0    | .0    | .0  | 4.6  |           |
| 3-4     | .0  | 1.0  | 2.4   | .5    | .0    | .0  | 3.9  | .0  | 1.2  | 3.0   | 1.2   | .0    | .0  | 5.4  |           |
| 5-6     | .1  | .3   | 2.4   | .5    | .1    | .0  | 3.4  | .0  | .0   | 2.5   | .9    | .0    | .0  | 3.4  |           |
| 7       | .0  | .1   | 1.1   | 1.2   | .0    | .0  | 2.4  | .1  | .1   | 1.2   | .4    | .0    | .0  | 1.8  |           |
| 8-9     | .0  | .0   | .1    | .6    | .1    | .0  | .9   | .0  | .0   | .5    | .4    | .0    | .0  | 1.0  |           |
| 10-11   | .0  | .0   | .2    | .3    | .0    | .0  | .6   | .0  | .0   | .1    | .5    | .0    | .0  | .6   |           |
| 12      | .0  | .0   | .0    | .3    | .0    | .0  | .3   | .0  | .0   | .0    | .4    | .0    | .0  | .4   |           |
| 13-16   | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0   | .1    | .1    | .1    | .0  | .3   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .5  | 4.5  | 8.1   | 3.7   | .2    | .0  | 17.0 | .6  | 4.4  | 9.0   | 3.9   | .1    | .0  | 18.0 | 99.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.9 | 2.8  | .4    | .0    | .0    | .0  | 6.1   |         |
| 1-2     | 1.1 | 14.4 | 9.8   | .0    | .0    | .0  | 25.3  |         |
| 3-4     | .1  | 7.0  | 16.9  | 3.2   | .0    | .0  | 27.2  |         |
| 5-6     | .1  | 1.8  | 13.8  | 3.7   | .1    | .0  | 19.5  |         |
| 7       | .1  | .3   | 6.7   | 4.6   | .2    | .0  | 12.0  |         |
| 8-9     | .1  | .0   | 2.5   | 2.2   | .2    | .0  | 5.0   |         |
| 10-11   | .0  | .0   | .6    | 1.9   | .4    | .0  | 3.0   |         |
| 12      | .0  | .0   | .1    | 1.0   | .1    | .0  | 1.2   |         |
| 13-16   | .0  | .0   | .1    | .4    | .1    | .0  | .6    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.4 | 26.4 | 50.9  | 17.1  | 1.3   | .0  | 100.0 | 937     |

PERIOD: (OVER-ALL) 1949-1972

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 7.3  | 12.7 | 6.1  | 2.0  | .6   | .7    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 594   | 4        |
| 6-7          | .1  | .6   | 5.8  | 9.3  | 5.9  | 2.9  | .9    | .5  | .3    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 497   | 6        |
| 8-9          | .1  | .2   | 1.4  | 3.6  | 5.2  | 2.6  | 1.9   | .7  | .8    | .0    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 313   | 7        |
| 10-11        | .0  | .5   | .4   | 1.3  | 1.9  | 2.1  | 1.2   | .7  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 164   | 8        |
| 12-13        | .0  | .0   | .3   | .3   | .6   | .7   | .7    | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 60    | 8        |
| >13          | .0  | .0   | .0   | .2   | .2   | .1   | .4    | .1  | .3    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 25    | 10       |
| INDET        | 2.0 | 1.4  | 2.3  | 1.5  | 1.8  | 1.1  | .6    | .4  | .5    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 219   | 5        |
| TOTAL        | 76  | 188  | 429  | 421  | 330  | 191  | 120   | 54  | 51    | 5     | 7     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 1872  | 6        |
| PCT          | 4.1 | 10.0 | 22.9 | 22.5 | 17.6 | 10.2 | 6.4   | 2.9 | 2.7   | .3    | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1856-1972

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38.0N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FDG WD PCPN | FDG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | 3.1  | 5.5       | 2.4  | .0        | .0   | .0              | .0   | 10.6            | 6.2            | .2                      | .0          | .2                  | .0         | .0              | 82.9       |
| NE                 | 2.6  | 3.9       | 1.4  | .0        | .0   | .0              | .0   | 7.9             | 5.5            | .0                      | .9          | .0                  | .2         | .2              | 85.2       |
| E                  | 3.0  | 1.5       | 3.4  | .0        | .0   | .0              | .0   | 7.5             | 3.2            | .0                      | 1.2         | .0                  | .3         | .0              | 87.8       |
| SE                 | 5.8  | 4.1       | 3.3  | .0        | .0   | .0              | .0   | 12.7            | 5.4            | .0                      | 1.2         | .0                  | .3         | .0              | 80.3       |
| S                  | 5.4  | 1.7       | 4.0  | .0        | .0   | .0              | .0   | 10.0            | 6.5            | .5                      | 1.4         | .0                  | 1.4        | .0              | 80.2       |
| SW                 | 3.7  | 1.8       | 1.4  | .0        | .0   | .0              | .0   | 6.9             | 4.7            | .2                      | .3          | .0                  | .2         | .3              | 87.3       |
| W                  | 3.3  | 2.2       | 2.2  | .0        | .0   | .0              | .0   | 7.5             | 4.9            | 1.0                     | 1.8         | .0                  | 1.3        | .0              | 83.4       |
| NW                 | 1.7  | 4.7       | 1.3  | .0        | .0   | .0              | .3   | 7.8             | 5.3            | .8                      | 1.1         | .3                  | .0         | .0              | 85.0       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .0   | .0        | 3.3  | .0        | .0   | .0              | .0   | 3.3             | .0             | .0                      | 3.3         | .0                  | 6.7        | .0              | 86.7       |
| TOT PCT            | 3.4  | 3.2       | 2.4  | .0        | .0   | .0              | *    | 8.8             | 5.2            | .3                      | 1.0         | .1                  | .5         | .1              | 84.1       |
| TOT OBS:           | 2896 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FDG WD<br>PCPN | FDG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 0000          | 4.1                | 3.6          | 2.3  | .0           | .0   | .0                    | .0   | 9.7                     | 5.7               | .6           | .1             | .0                        | .4            | .3                              | 83.3             |
| 0600          | 3.5                | 3.5          | 2.9  | .0           | .0   | .0                    | .0   | 9.6                     | 4.7               | .7           | 1.2            | .1                        | .4            | .0                              | 83.2             |
| 1200          | 2.3                | 2.9          | 1.6  | .0           | .0   | .0                    | .0   | 6.6                     | 4.8               | .0           | 1.2            | .1                        | .7            | .0                              | 86.6             |
| 1800          | 3.7                | 3.1          | 2.7  | .0           | .0   | .0                    | .1   | 9.3                     | 5.6               | .1           | 1.8            | .0                        | .5            | .0                              | 82.7             |
| TOT PCT       | 3.4                | 3.3          | 2.4  | .0           | .0   | .0                    | *    | 8.8                     | 5.2               | .3           | 1.1            | .1                        | .5            | .1                              | 84.0             |
| TOT OBS:      | 2944               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    | 00   |       |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .8                 | 3.7  | 6.0   | 2.4   | .9    | .2 |      | 14.0  | 16.6      |          | 14.8     | 15.0       | 14.4  | 14.7  | 13.4  | 11.6  | 13.7  | 14.1  |
| NE       | .5                 | 5.0  | 5.6   | 2.7   | .5    | *  |      | 14.3  | 15.1      |          | 14.4     | 10.9       | 13.5  | 13.1  | 16.2  | 15.2  | 14.3  | 14.9  |
| E        | .5                 | 3.5  | 4.8   | 1.4   | .2    | *  |      | 10.4  | 13.9      |          | 10.4     | 10.4       | 9.1   | 8.9   | 11.0  | 10.8  | 11.5  | 9.7   |
| SE       | .3                 | 3.5  | 4.9   | 1.3   | .2    | .0 |      | 10.2  | 14.0      |          | 11.1     | 10.1       | 9.4   | 11.2  | 9.1   | 8.9   | 10.9  | 11.7  |
| S        | .5                 | 3.9  | 5.3   | 1.6   | .1    | .1 |      | 11.5  | 14.3      |          | 11.0     | 10.9       | 11.9  | 9.0   | 11.5  | 13.2  | 11.6  | 12.4  |
| SW       | .5                 | 4.0  | 5.5   | 1.3   | .4    | *  |      | 11.6  | 14.2      |          | 11.6     | 13.3       | 11.9  | 12.7  | 11.5  | 11.6  | 11.1  | 10.5  |
| W        | .6                 | 4.1  | 5.7   | 2.2   | .5    | *  |      | 13.1  | 15.2      |          | 12.3     | 13.5       | 13.9  | 14.2  | 12.8  | 12.4  | 13.0  | 12.6  |
| NW       | .6                 | 3.9  | 5.2   | 2.7   | 1.0   | .1 |      | 13.5  | 16.9      |          | 12.6     | 15.2       | 13.9  | 13.7  | 13.8  | 14.7  | 13.0  | 12.8  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.4                |      |       |       |       |    |      | 1.4   | .0        |          | 1.8      | .7         | 2.0   | 2.7   | .7    | 1.6   | .8    | 1.2   |
| TOT OBS  | 253                | 1401 | 1901  | 697   | 162   | 20 | 4434 | 14.9  |           |          | 685      | 278        | 858   | 293   | 713   | 304   | 981   | 322   |
| TOT PCT  | 5.7                | 31.6 | 42.9  | 15.7  | 3.7   | .5 |      | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |       |
|----------|--------------------|------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |       |
| N        | 2.1                | 5.7  | 4.2   | 1.6   | .3       |      |              | 14.0        | 16.6        | 14.9       | 14.5     | 12.8     | 13.8  |
| NE       | 2.2                | 6.5  | 4.2   | 1.3   | .1       |      |              | 14.3        | 15.1        | 13.4       | 13.4     | 15.9     | 14.5  |
| E        | 1.6                | 5.4  | 2.9   | .4    | *        |      |              | 10.4        | 13.9        | 10.4       | 9.1      | 11.0     | 11.1  |
| SE       | 1.6                | 5.3  | 2.7   | .5    | .1       |      |              | 10.2        | 14.0        | 10.8       | 9.8      | 9.0      | 11.1  |
| S        | 1.6                | 5.9  | 3.4   | .6    | .1       |      |              | 11.5        | 14.3        | 11.0       | 11.1     | 12.0     | 11.8  |
| SW       | 1.5                | 6.4  | 3.0   | .6    | .1       |      |              | 11.6        | 14.2        | 12.1       | 12.1     | 11.5     | 10.9  |
| W        | 1.9                | 6.1  | 3.8   | 1.1   | .1       |      |              | 13.1        | 15.2        | 12.6       | 14.0     | 12.7     | 12.9  |
| NW       | 2.2                | 5.2  | 3.8   | 2.0   | .2       |      |              | 13.5        | 16.9        | 13.4       | 13.8     | 14.1     | 12.9  |
| VAR      | .0                 | .0   | .0    | .0    | .0       |      |              | .0          | .0          | .0         | .0       | .0       | .0    |
| CALM     | 1.4                |      |       |       |          |      |              | 1.4         | .0          | 1.5        | 2.2      | 1.0      | .9    |
| TOT OBS  | 717                | 2065 | 1241  | 366   | 45       | 4434 |              | 14.9        |             | 963        | 1151     | 1017     | 1303  |
| TOT PCT  | 16.2               | 46.6 | 28.0  | 8.3   | 1.0      |      |              | 100.0       |             | 100.0      | 100.0    | 100.0    | 100.0 |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1856-1972

NOVEMBER

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38.0N 26.7W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|----------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003    | 1.5  | 3.9 | 30.1 | 44.5  | 15.0  | 4.6   | .4  | 15.3 | 100.0    | 963       |
| 06009    | 2.2  | 4.9 | 34.3 | 41.9  | 13.8  | 2.4   | .5  | 13.9 | 100.0    | 1151      |
| 12015    | 1.0  | 4.6 | 28.7 | 44.5  | 16.8  | 3.8   | .5  | 15.4 | 100.0    | 1017      |
| 18021    | .9   | 3.9 | 32.5 | 41.2  | 17.1  | 3.9   | .4  | 15.2 | 100.0    | 1303      |
| TOT      | 61   | 192 | 1401 | 1901  | 697   | 162   | 20  | 14.9 |          | 4434      |
| PCT      | 1.4  | 4.3 | 31.6 | 42.9  | 15.7  | 3.7   | .5  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 1.6  | 3.3  | 6.3  | 3.2       |           | 5.4              |
| NE       | 1.6  | 3.2  | 6.5  | 3.6       |           | 5.5              |
| E        | 1.5  | 2.3  | 4.6  | 2.9       |           | 5.5              |
| SE       | 1.6  | 1.6  | 4.3  | 3.0       |           | 5.6              |
| S        | 2.1  | 1.8  | 3.5  | 4.0       |           | 5.5              |
| SW       | 1.6  | 2.3  | 3.5  | 3.6       |           | 5.5              |
| W        | 2.6  | 2.7  | 4.4  | 3.0       |           | 5.0              |
| NW       | 2.2  | 2.8  | 5.2  | 3.0       |           | 5.1              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | .2   | .2   | .3   | .3        |           | 5.0              |
| TOT OBS  | 350  | 470  | 906  | 624       | 2350      | 5.4              |
| TOT PCT  | 14.9 | 20.0 | 38.6 | 26.6      | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|------|------|------|------|------|------|-------|-----------------|-----------|
| 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| .0  | .1  | .3  | 1.5  | 3.2  | 2.0  | .4   | .2   | .1   | .1    | 6.6             |           |
| *   | .1  | .1  | 1.8  | 2.9  | 1.9  | 1.1  | *    | .1   | .1    | 6.7             |           |
| *   | .0  | .4  | 1.4  | 1.7  | 1.3  | .7   | .1   | .1   | *     | 5.5             |           |
| .0  | *   | .4  | 1.3  | 2.0  | 1.0  | .5   | .1   | .0   | *     | 5.2             |           |
| *   | .4  | 1.4 | 2.1  | 1.1  | .5   | .2   | .1   | *    | 5.5   |                 |           |
| *   | .1  | .2  | 1.3  | 1.9  | 1.1  | .4   | .2   | *    | .1    | 5.6             |           |
| .1  | *   | .5  | 1.6  | 1.9  | 1.0  | .4   | .1   | .1   | .0    | 6.9             |           |
| .1  | *   | .6  | 1.7  | 1.9  | 1.3  | .4   | .1   | .1   | .1    | 6.8             |           |
| .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| *   | .0  | .0  | *    | .2   | *    | .1   | .0   | .0   | .0    | .4              |           |
| 9   | 10  | 67  | 283  | 419  | 257  | 106  | 22   | 15   | 9     | 1153            | 2350      |
| .4  | .4  | 2.9 | 12.0 | 17.8 | 10.9 | 4.5  | .9   | .6   | .4    | 49.1            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | * OR >10 | * OR >5 | * OR >2 | VSBY (NM)<br>* OR >1 | * OR >1/2 | * OR >1/4 | * OR >50YD | * OR >0 |
|----------------|----------|---------|---------|----------------------|-----------|-----------|------------|---------|
| * OR >6500     | .7       | 1.0     | 1.0     | 1.0                  | 1.0       | 1.0       | 1.0        | 1.0     |
| * OR >5000     | 1.3      | 1.9     | 1.9     | 1.9                  | 1.9       | 1.9       | 1.9        | 1.9     |
| * OR >3500     | 4.9      | 6.3     | 6.4     | 6.4                  | 6.4       | 6.4       | 6.4        | 6.4     |
| * OR >2000     | 12.9     | 16.7    | 17.1    | 17.2                 | 17.2      | 17.2      | 17.2       | 17.2    |
| * OR >1000     | 26.4     | 34.0    | 34.8    | 34.8                 | 34.9      | 35.0      | 35.0       | 35.0    |
| * OR >600      | 34.1     | 45.1    | 46.8    | 46.8                 | 46.9      | 47.0      | 47.0       | 47.0    |
| * OR >300      | 35.0     | 47.2    | 49.6    | 49.7                 | 49.8      | 49.9      | 49.9       | 49.9    |
| * OR >150      | 35.0     | 47.5    | 49.9    | 50.1                 | 50.2      | 50.3      | 50.3       | 50.3    |
| * OR >0        | 35.1     | 47.7    | 50.2    | 50.4                 | 50.5      | 50.7      | 50.7       | 50.7    |
| TOTAL          | 832      | 1131    | 1191    | 1195                 | 1198      | 1201      | 1201       | 1202    |

TOTAL NUMBER OF OBS: 2371

PCT FREQ NH <5/8: 49.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4    | 5   | 6    | 7    | 8    | 8 OBSCD | TOTAL OBS |
|-----|-----|------|------|------|-----|------|------|------|---------|-----------|
| 6.2 | 6.0 | 11.9 | 12.3 | 12.2 | 8.8 | 12.5 | 10.4 | 19.4 | .2      | 2519      |



PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1856-1972

# NOVEMBER

AREA 0001 AZORES  
38.0N 26.7W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | *    | *    | .0   | *    | .1   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .0   | .0   | *    | *    | .0   | *    | .0   | .0  | *    | .1    |              |
|              | TOT %  | *    | *    | .0   | .1   | .1   | .0   | *    | .0   | .0  | *    | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | *    | *    | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .1   | .1   | *    | .2   | .0   | .1   | *    | .0  | .0   | .4    |              |
|              | TOT %  | .0   | .1   | .1   | .1   | .2   | .0   | .1   | *    | .0  | .0   | .4    |              |
| 1<2          | PCP    | .0   | *    | *    | *    | .0   | *    | *    | *    | .0  | .0   | .2    |              |
|              | NO PCP | .0   | .0   | .0   | *    | *    | *    | *    | *    | .0  | .0   | .1    |              |
|              | TOT %  | .0   | *    | *    | .1   | *    | .1   | *    | *    | .0  | .0   | .3    |              |
| 2<5          | PCP    | .1   | .1   | .2   | .3   | .4   | .1   | .1   | .1   | .0  | *    | 1.5   |              |
|              | NO PCP | .1   | .1   | .1   | .2   | .3   | .1   | .2   | .3   | .0  | .0   | 1.4   |              |
|              | TOT %  | .3   | .2   | .3   | .4   | .7   | .2   | .3   | .5   | .0  | *    | 2.9   |              |
| 5<10         | PCP    | .9   | .6   | .5   | .6   | .5   | .4   | .7   | .6   | .0  | .0   | 4.8   |              |
|              | NO PCP | 2.9  | 2.4  | 1.6  | 1.9  | 2.1  | 1.9  | 2.2  | 2.7  | .0  | .3   | 18.0  |              |
|              | TOT %  | 3.7  | 3.0  | 2.1  | 2.5  | 2.6  | 2.3  | 2.9  | 3.3  | .0  | .3   | 22.8  |              |
| 10+          | PCP    | .5   | .4   | .2   | .3   | .2   | .2   | .1   | .3   | .0  | .0   | 2.1   |              |
|              | NO PCP | 10.0 | 11.0 | 8.7  | 6.8  | 7.5  | 8.0  | 9.1  | 9.4  | .0  | .7   | 71.2  |              |
|              | TOT %  | 10.5 | 11.4 | 8.9  | 7.1  | 7.7  | 8.2  | 9.2  | 9.7  | .0  | .7   | 73.3  |              |
| TOT OBS      |        |      |      |      |      |      |      |      |      |     |      |       | 2889         |
| TOT PCT      |        |      |      |      |      |      |      |      |      |     |      |       |              |
|              |        | 14.6 | 14.7 | 11.3 | 10.2 | 11.3 | 10.8 | 12.5 | 13.6 | .0  | 1.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0   | .0   | .0   | .0   | .0  | *    | *     |              |
|              | 4-10       | .0   | .0   | .0   | *   | .0   | .0   | *    | .0   | .0  |      | .1    |              |
|              | 11-21      | *    | *    | .0   | .0  | .1   | .0   | .0   | .0   | .0  |      | .1    |              |
|              | 22+        | .0   | .0   | .0   | *   | *    | .0   | .0   | .0   | .0  |      | .1    |              |
|              | TOT %      | *    | *    | .0   | .1  | .1   | .0   | *    | .0   | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | *   | *    | *    | *    | *    | .0  |      | .1    |              |
|              | 11-21      | .0   | *    | *    | *   | .1   | .0   | *    | .0   | .0  |      | .2    |              |
|              | 22+        | .0   | *    | *    | .0  | .0   | .0   | .0   | .0   | .0  |      | .1    |              |
|              | TOT %      | .0   | .1   | .1   | *   | .2   | *    | *    | *    | .0  | .0   | .4    |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0   | *    | *    | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | *    | .0   | .0  | .0   | .0   | .0   | .0   | .0  |      | *     |              |
|              | 11-21      | .0   | .0   | *    | .0  | *    | *    | *    | *    | .0  |      | .1    |              |
|              | 22+        | .0   | *    | *    | .1  | .1   | .1   | .0   | .0   | .0  |      | .3    |              |
|              | TOT %      | .0   | .1   | *    | .1  | .1   | .1   | *    | *    | .0  | .0   | .5    |              |
| 2<5          | 0-3        | *    | .0   | .0   | *   | *    | *    | *    | *    | .0  | .1   | .2    |              |
|              | 4-10       | .1   | *    | .0   | .1  | .1   | *    | .1   | .1   | .0  |      | .6    |              |
|              | 11-21      | *    | .1   | .1   | *   | .3   | .1   | .1   | *    | .0  |      | .9    |              |
|              | 22+        | .2   | .2   | .2   | .2  | .3   | .1   | .1   | .3   | .0  |      | 1.7   |              |
|              | TOT %      | .3   | .3   | .4   | .4  | .7   | .4   | .4   | .5   | .0  | .1   | 3.4   |              |
| 5<10         | 0-3        | .1   | *    | .1   | .1  | *    | *    | .1   | .2   | .0  | .3   | 1.0   |              |
|              | 4-10       | .9   | .5   | .6   | .3  | .5   | .6   | .8   | .8   | .0  |      | 4.7   |              |
|              | 11-21      | 1.3  | 1.2  | .8   | 1.4 | 1.5  | 1.3  | 1.5  | 1.4  | .0  |      | 10.4  |              |
|              | 22+        | 1.4  | 1.1  | .6   | .5  | .8   | .8   | .9   | 1.0  | .0  |      | 7.1   |              |
|              | TOT %      | 3.7  | 2.9  | 2.0  | 2.3 | 2.8  | 2.6  | 3.1  | 3.4  | .0  | .3   | 23.2  |              |
| 10+          | 0-3        | .6   | .5   | .3   | .2  | .3   | .2   | .4   | .5   | .0  | .9   | 3.8   |              |
|              | 4-10       | 2.8  | 4.5  | 2.9  | 2.6 | 2.8  | 3.1  | 3.3  | 3.0  | .0  |      | 25.2  |              |
|              | 11-21      | 5.0  | 4.4  | 3.9  | 3.1 | 3.4  | 3.9  | 4.2  | 3.9  | .0  |      | 31.8  |              |
|              | 22+        | 2.1  | 2.1  | .9   | .6  | .8   | .8   | 1.7  | 2.5  | .0  |      | 11.5  |              |
|              | TOT %      | 10.6 | 11.5 | 7.9  | 6.5 | 7.4  | 8.0  | 9.7  | 9.9  | .0  | .9   | 72.4  |              |
| TOT OBS      |            |      |      |      |     |      |      |      |      |     |      |       | 3614         |
| TOT PCT      |            |      |      |      |     |      |      |      |      |     |      |       |              |
|              |            | 14.7 | 14.8 | 10.4 | 9.4 | 11.2 | 11.1 | 13.3 | 13.8 | .0  | 1.2  | 100.0 |              |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1856-1972

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38.0N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .0         | .2         | 2.6        | 10.3       | 19.1         | 10.2         | 4.1          | .5           | .9           | .3    | 48.3  | 51.7                | 580          |
| 06009         | .4         | .4         | 2.5        | 11.7       | 18.0         | 9.4          | 4.0          | 1.0          | .4           | .2    | 47.9  | 52.1                | 522          |
| 12015         | .2         | .6         | 2.9        | 12.7       | 15.2         | 11.2         | 4.4          | .9           | .5           | .6    | 49.2  | 50.8                | 659          |
| 18021         | .9         | .4         | 3.3        | 11.9       | 17.9         | 11.3         | 4.9          | 1.2          | .7           | .3    | 52.7  | 47.3                | 675          |
| TOT           | 9          | 10         | 69         | 285        | 426          | 258          | 107          | 22           | 15           | 9     | 1210  | 1226                | 2436         |
| PCT           | .4         | .4         | 2.8        | 11.7       | 17.5         | 10.6         | 4.4          | .9           | .6           | .4    | 49.7  | 50.3                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .1    | .2  | 1.8 | 22.4 | 75.2 | 832          |
| 06009         | .0   | .4    | .4  | 3.3 | 24.4 | 71.4 | 905          |
| 12015         | .5   | .3    | .5  | 3.2 | 21.0 | 74.5 | 884          |
| 18021         | .2   | .6    | .7  | 5.1 | 24.7 | 68.8 | 1041         |
| TOT           | 8    | 14    | 17  | 126 | 850  | 2647 | 3662         |
| PCT           | .2   | .4    | .5  | 3.4 | 23.2 | 72.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .0            | 3.2        | 14.6        | 35.6            | 49.8               | 556          |
| 06009         | .4            | 3.5        | 17.2        | 32.1            | 50.7               | 511          |
| 12015         | .2            | 3.9        | 18.1        | 32.4            | 49.5               | 642          |
| 18021         | .9            | 4.7        | 18.6        | 35.5            | 45.9               | 662          |
| TOT           | 9             | 92         | 408         | 805             | 1158               | 2371         |
| PCT           | .4            | 3.9        | 17.2        | 34.0            | 48.8               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | *     | .3    | .2    | .0    | .1     | 15           | .6          |
| 70/74  | .0   | .0    | *     | .5    | .7    | 1.1   | 1.8   | 1.4    | 133          | 5.4         |
| 65/69  | .0   | *     | .1    | 1.4   | 3.8   | 8.9   | 14.3  | 13.6   | 1030         | 42.2        |
| 60/64  | .0   | .0    | .1    | 2.8   | 10.7  | 13.8  | 10.4  | 7.4    | 1103         | 45.2        |
| 55/59  | .0   | .0    | .1    | .9    | 1.5   | 1.0   | 1.8   | .9     | 150          | 6.1         |
| 50/54  | .0   | .0    | .0    | .0    | *     | .2    | .2    | *      | 11           | .5          |
| TOTAL  | 0    | 1     | 8     | 136   | 419   | 612   | 695   | 571    | 2442         | 100.0       |
| PCT    | .0   | *     | .3    | 5.6   | 17.2  | 25.1  | 28.5  | 23.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM |
|------|------|------|------|------|------|------|------|-----|------|
| .0   | *    | .1   | .1   | .1   | *    | .1   | .1   | .0  | .0   |
| .2   | .2   | .5   | .7   | 1.1  | 1.1  | .8   | .7   | .0  | .1   |
| 2.9  | 3.8  | 4.5  | 5.8  | 7.7  | 7.4  | 5.9  | 3.7  | .0  | .5   |
| 9.4  | 8.9  | 5.5  | 3.7  | 2.3  | 2.9  | 4.5  | 7.4  | .0  | .5   |
| 1.8  | 1.0  | .4   | .1   | .2   | .1   | .7   | 1.8  | .0  | *    |
| .1   | *    | .0   | .0   | .0   | .0   | .1   | .2   | .0  | .0   |
| 14.5 | 14.0 | 11.1 | 10.3 | 11.3 | 11.5 | 12.2 | 13.9 | .0  | 1.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 70  | 69  | 64  | 58 | 56 | 53  | 63.8 | 964          |
| 06009         | 73  | 70  | 68  | 64  | 58 | 55 | 52  | 63.6 | 1153         |
| 12015         | 78  | 75  | 71  | 65  | 60 | 56 | 53  | 65.4 | 1006         |
| 18021         | 77  | 73  | 70  | 64  | 59 | 57 | 54  | 64.7 | 1282         |
| TOT           | 79  | 72  | 70  | 64  | 59 | 56 | 52  | 64.4 | 4405         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR |      |       |       |       |       |        |      |              |  |
|--|------|-------|-------|-------|-------|--------|------|--------------|--|
| HOUR<br>(GMT)                                  | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |  |
| 00003  | .0   | 4.5   | 14.9  | 25.0  | 29.3  | 26.3   | 80   | 604          |  |
| 06009  | .0   | 5.7   | 15.3  | 24.2  | 28.5  | 26.2   | 80   | 561          |  |
| 12015  | .0   | 9.4   | 19.7  | 26.1  | 25.8  | 19.1   | 77   | 640          |  |
| 18021  | .0   | 4.7   | 17.9  | 24.9  | 30.1  | 22.4   | 79   | 675          |  |
| TOT  | 0    | 151   | 423   | 622   | 705   | 579    | 79   | 2480         |  |

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PERIOD: (PRIMARY) 1926-1972  
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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WQ<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .1       | 8     | .0       | .3        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .2       | .3       | .1       | 18    | .0       | .7        |
| 6                  | .0       | .0       | *        | .0       | .1       | .3       | .2       | .0       | 18    | .0       | .7        |
| 5                  | .0       | .0       | .0       | *        | .1       | .6       | .1       | .0       | 22    | .0       | .8        |
| 4                  | .0       | .0       | .0       | .1       | .7       | .7       | *        | .0       | 41    | .0       | 1.5       |
| 3                  | .0       | .0       | .0       | .2       | 1.5      | .9       | .1       | .0       | 73    | .0       | 2.7       |
| 2                  | .0       | .0       | .0       | .4       | 4.5      | 2.0      | .1       | .0       | 191   | .2       | 6.9       |
| 1                  | .0       | .0       | .1       | 1.2      | 5.5      | 2.0      | *        | .0       | 236   | .3       | 8.5       |
| 0                  | .0       | .0       | .2       | 3.2      | 8.2      | 1.3      | *        | .0       | 348   | .2       | 12.8      |
| -1                 | .0       | .0       | .5       | 5.3      | 5.5      | .8       | .0       | .0       | 326   | .3       | 11.8      |
| -2                 | .0       | .0       | 1.0      | 7.2      | 4.5      | .2       | .0       | .0       | 345   | .1       | 12.7      |
| -3                 | .0       | *        | 1.5      | 6.8      | 3.1      | .1       | .0       | .0       | 313   | .0       | 11.7      |
| -4                 | .0       | .0       | 1.7      | 5.6      | 1.6      | *        | *        | .0       | 243   | .0       | 9.1       |
| -5                 | .0       | .1       | 2.2      | 4.4      | .8       | .0       | .0       | .0       | 199   | .0       | 7.4       |
| -6                 | .0       | .0       | 1.3      | 2.2      | .5       | .1       | .0       | .0       | 110   | .0       | 4.1       |
| -7/-8              | .0       | .6       | 1.8      | 1.6      | .3       | .0       | .0       | .0       | 115   | .0       | 4.3       |
| -9/-10             | *        | .3       | .8       | .6       | .1       | .0       | .0       | .0       | 48    | .0       | 1.8       |
| -11/-13            | .0       | .3       | .5       | .2       | .0       | .0       | .0       | .0       | 26    | .0       | 1.0       |
| -14/-16            | .0       | *        | .1       | *        | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| TOTAL              | 1        |          | 313      |          | 1001     |          | 29       |          | 2684  | 31       | 2653      |
| PCT                | *        | 1.3      | 11.7     | 39.1     | 37.3     | 9.4      | 1.1      | .1       | 100.0 | 1.2      | 98.8      |

PERIOD: (OVER-ALL) 1963-1972

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | .0   | .0    | .0    | .0    | .0  | .2   | .2  | .5   | *     | .0    | .0    | .0  | .7   |
| 1-2     | .0  | 1.1  | 1.1   | .0    | .0    | .0  | 2.2  | .0  | 2.6  | 1.0   | .0    | .0    | .0  | 3.6  |
| 3-4     | .0  | .9   | 2.5   | .0    | .0    | .0  | 3.4  | .0  | 1.3  | 2.5   | .6    | .0    | .0  | 4.4  |
| 5-6     | .0  | .7   | 2.0   | .6    | .0    | .0  | 3.3  | .0  | .8   | 2.0   | 1.0   | .0    | .0  | 3.7  |
| 7       | .0  | .0   | 1.1   | .4    | .0    | .0  | 1.5  | .0  | .2   | .6    | .5    | .0    | .0  | 1.3  |
| 8-9     | .0  | .0   | .6    | .6    | .1    | .0  | 1.3  | .0  | .0   | .2    | .7    | .1    | .0  | 1.0  |
| 10-11   | .0  | .1   | .2    | .2    | .1    | .0  | .6   | .0  | .0   | .1    | .5    | .0    | .0  | .6   |
| 12      | .0  | .0   | .0    | .1    | .1    | .0  | .2   | .0  | .0   | .0    | .4    | *     | .0  | .4   |
| 13-16   | .0  | .0   | .0    | .6    | .3    | .0  | .9   | .0  | .0   | .0    | .4    | .1    | .0  | .5   |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | *     | .0  | *    |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .2  | 2.7  | 7.5   | 2.5   | .6    | .0  | 13.5 | .2  | 5.4  | 6.5   | 4.0   | .3    | .0  | 16.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | .8   | .3    | .0    | .0    | .0  | 1.3  | *   | .3   | *     | .0    | .0    | .0  | .4   |
| 1-2     | .0  | 2.0  | 1.2   | .0    | .0    | .0  | 3.2  | .0  | 1.9  | .9    | .0    | .0    | .0  | 2.8  |
| 3-4     | .0  | 1.0  | 2.3   | .2    | .0    | .0  | 3.5  | .0  | .9   | 2.3   | .3    | .0    | .0  | 3.5  |
| 5-6     | .0  | .3   | 1.7   | .6    | .1    | .0  | 2.7  | .0  | .2   | 1.8   | .3    | .0    | .0  | 2.3  |
| 7       | .0  | .0   | 1.1   | .9    | .0    | .0  | 2.0  | .0  | .0   | .3    | .3    | .0    | .0  | .6   |
| 8-9     | .0  | .0   | .2    | .5    | .0    | .0  | .7   | .0  | .0   | .1    | .4    | .0    | .0  | .5   |
| 10-11   | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0   | .0    | .4    | *     | .0  | .5   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .2    | .0  | .2   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .2  | 4.1  | 6.7   | 2.4   | .3    | .0  | 13.7 | *   | 3.3  | 5.4   | 2.2   | .1    | .0  | 10.9 |



PERIOD: (OVER-ALL) 1963-1972

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .1  | .5   | .0    | .0    | .0    | .0  | .5   | .0  | .4   | .0    | .0    | .0    | .0  | .4   |
| 1-2     | .3  | .3   | .9    | .0    | .0    | .0  | 1.4  | .0  | 1.3  | .8    | .0    | .0    | .0  | 2.1  |
| 3-4     | .0  | .9   | 2.1   | .3    | .0    | .0  | 3.3  | .0  | 1.0  | 2.2   | .0    | .0    | .0  | 3.2  |
| 5-6     | .0  | .3   | 1.3   | .3    | .1    | .0  | 1.9  | .0  | .0   | 1.8   | .4    | .0    | .0  | 2.2  |
| 7       | .0  | .0   | .8    | .9    | .0    | .0  | 1.7  | .0  | .0   | .6    | .5    | .1    | .0  | 1.3  |
| 8-9     | .0  | .0   | .2    | .4    | .0    | .0  | .6   | .0  | .1   | .2    | .3    | .2    | .0  | .9   |
| 10-11   | .0  | .0   | .2    | .2    | .1    | .0  | .4   | .0  | .1   | .1    | .0    | .2    | .0  | .4   |
| 12      | .0  | .0   | .1    | .2    | .1    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .1    | .1    | .1    | .0  | .3   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 1.8  | 5.6   | 2.5   | .3    | .0  | 10.6 | .0  | 2.8  | 5.6   | 1.3   | .8    | .0  | 10.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .0  | .4   | .0    | .0    | .0    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .1   |           |
| 1-2     | .0  | 1.8  | .4    | .0    | .0    | .0  | 2.2  | .1  | 1.0  | .5    | .0    | .0    | .0  | 1.5  |           |
| 3-4     | .0  | 1.4  | 2.2   | .3    | .0    | .0  | 3.8  | .0  | 1.8  | 1.4   | .1    | .0    | .0  | 3.4  |           |
| 5-6     | .0  | .3   | 1.7   | .4    | .0    | .0  | 2.4  | .0  | .3   | 1.3   | .5    | .1    | .0  | 2.1  |           |
| 7       | .0  | .1   | .4    | .6    | .1    | .0  | 1.2  | .0  | .2   | .7    | .5    | .2    | .1  | 1.7  |           |
| 8-9     | .0  | .0   | .3    | .3    | .0    | .0  | .6   | .0  | .0   | .4    | .6    | .1    | .0  | 1.1  |           |
| 10-11   | .0  | .0   | .2    | .2    | .1    | .0  | .6   | .0  | .0   | .0    | .0    | .1    | .0  | .8   |           |
| 12      | .0  | .1   | .0    | .1    | .1    | .0  | .3   | .0  | .0   | .0    | .3    | .1    | .0  | .4   |           |
| 13-16   | .0  | .0   | .0    | .1    | .2    | .0  | .3   | .0  | .0   | .0    | .2    | .1    | .0  | .3   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .2    | .1  | .4   |           |
| 20-22   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .0  | 4.0  | 5.2   | 2.0   | .5    | .0  | 11.7 | .1  | 3.3  | 4.3   | 2.8   | 1.2   | .2  | 11.8 | 99.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.2 | 3.1  | .3    | .0    | .0    | .0  | 5.6   |         |
| 1-2     | .4  | 11.9 | 6.6   | .0    | .0    | .0  | 18.9  |         |
| 3-4     | .0  | 9.1  | 17.3  | 1.8   | .0    | .0  | 28.2  |         |
| 5-6     | .0  | 2.7  | 13.4  | 4.0   | .3    | .0  | 20.4  |         |
| 7       | .0  | .5   | 5.5   | 4.5   | .4    | .1  | 10.9  |         |
| 8-9     | .0  | .1   | 2.1   | 3.7   | .6    | .0  | 6.5   |         |
| 10-11   | .0  | .2   | .8    | 2.3   | .6    | .0  | 3.9   |         |
| 12      | .0  | .1   | .1    | 1.3   | .4    | .0  | 1.9   |         |
| 13-16   | .0  | .0   | .1    | 1.4   | 1.1   | .0  | 2.6   |         |
| 17-19   | .0  | .0   | .0    | .2    | .3    | .1  | .6    |         |
| 20-22   | .0  | .0   | .0    | .2    | .1    | .0  | .3    |         |
| 23-25   | .0  | .0   | .0    | .1    | .2    | .0  | .3    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.6 | 27.7 | 46.2  | 19.4  | 4.0   | .2  | 100.0 | 1005    |

PERIOD: (OVER-ALL) 1949-1972

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 1.4 | 7.0  | 11.0 | 6.4  | 2.0  | 1.2  | .4    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 614      |
| 6-7          | .0  | 1.2  | 3.8  | 7.9  | 4.7  | 3.7  | 1.7   | 1.0 | 1.0   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 520      |
| 8-9          | .0  | .2   | 1.2  | 3.2  | 3.8  | 3.4  | 2.3   | .8  | 1.4   | .3    | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 355      |
| 10-11        | .0  | .3   | .4   | .8   | 1.4  | 1.7  | 1.3   | .8  | .7    | .0    | .2    | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 168      |
| 12-13        | .0  | .0   | .4   | .6   | .2   | 1.1  | .9    | .4  | .5    | .3    | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 99       |
| >13          | .0  | .0   | .0   | .2   | .2   | .2   | .0    | .1  | .8    | .0    | .3    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 43       |
| INDET        | 2.0 | 1.6  | 1.8  | 2.0  | 2.0  | 1.0  | .9    | .4  | .5    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 260      |
| TOTAL        | 72  | 213  | 386  | 437  | 296  | 253  | 154   | 77  | 107   | 19    | 25    | 10    | 10    | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2059     |
| PCT          | 3.5 | 10.3 | 18.7 | 21.2 | 14.4 | 12.3 | 7.5   | 3.7 | 5.2   | .9    | 1.2   | .5    | .5    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972

DECEMBER

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38.0N 26.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | 2.5                | 2.5       | 2.2  | .0        | .0   | .0              | .0   | 6.5                     | 5.9            | .0        | 1.2         | .0                  | .0         | .0              | 86.4       |
| NE       | 1.9                | 1.2       | 1.8  | .0        | .0   | .0              | .0   | 5.0                     | 2.9            | .0        | .0          | .0                  | .0         | .0              | 92.2       |
| E        | 1.7                | 2.7       | 2.9  | .0        | .0   | .0              | .0   | 6.2                     | 4.5            | .4        | .8          | .0                  | .3         | .0              | 87.8       |
| SE       | 3.8                | 1.6       | 2.2  | .0        | .0   | .0              | .0   | 7.6                     | 3.4            | .1        | 1.8         | .0                  | .9         | .0              | 86.2       |
| S        | 2.5                | 1.7       | 1.7  | .0        | .0   | .0              | .0   | 5.9                     | 4.2            | .2        | 1.7         | .0                  | 1.1        | .0              | 86.9       |
| SW       | 3.1                | 3.9       | 3.8  | .0        | .0   | .0              | .0   | 10.8                    | 3.5            | .5        | 3.3         | .1                  | .6         | .0              | 81.2       |
| W        | 1.9                | 3.6       | 2.7  | .0        | .0   | .0              | .0   | 8.1                     | 5.3            | .4        | 1.8         | .4                  | .0         | .0              | 83.9       |
| NW       | 2.3                | 4.4       | 2.6  | .0        | .0   | .0              | .0   | 9.0                     | 6.5            | .3        | .7          | .0                  | .0         | .0              | 83.5       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | 2.9  | .0        | .0   | .0              | .0   | 2.9                     | .0             | .0        | .0          | 2.9                 | .0         | .0              | 94.1       |
| TOT PCT  | 2.3                | 2.7       | 2.5  | .0        | .0   | .0              | .0   | 7.5                     | 4.4            | .3        | 1.5         | .1                  | .4         | .0              | 85.7       |
| TOT OBS: | 2863               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | 2.9                | 2.6       | 3.5  | .0        | .0   | .0              | .0   | 9.1                     | 4.1            | .6        | .9          | .1                  | .3         | .0              | 84.9       |
| 06009      | 2.0                | 2.4       | 2.1  | .0        | .0   | .0              | .0   | 6.5                     | 4.2            | .6        | 1.6         | .0                  | .3         | .0              | 86.8       |
| 12015      | 2.0                | 2.9       | 2.4  | .0        | .0   | .0              | .0   | 6.9                     | 5.6            | .0        | 1.6         | .1                  | .7         | .0              | 85.1       |
| 18021      | 2.5                | 2.8       | 2.2  | .0        | .0   | .0              | .0   | 7.4                     | 3.7            | .0        | 2.1         | .1                  | .5         | .0              | 86.1       |
| TOT PCT    | 2.3                | 2.7       | 2.5  | .0        | .0   | .0              | .0   | 7.5                     | 4.4            | .3        | 1.5         | .1                  | .4         | .0              | 85.7       |
| TOT OBS:   | 2908               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .5                 | 2.8  | 3.2   | 1.5   | .4    | .1  |      | 8.6       | 15.6     |          | 8.5        | 5.9   | 9.0   | 8.9   | 8.6   | 8.1   | 9.8   | 6.8   |
| NE       | .3                 | 3.2  | 3.8   | 1.1   | .1    | .0  |      | 8.6       | 13.5     |          | 8.4        | 8.8   | 6.3   | 8.5   | 9.7   | 8.7   | 9.4   | 10.3  |
| E        | .5                 | 4.3  | 4.7   | 1.4   | .2    | .0  |      | 11.0      | 13.6     |          | 11.8       | 8.2   | 10.6  | 11.1  | 13.1  | 10.4  | 10.5  | 10.3  |
| SE       | .3                 | 4.3  | 5.2   | 1.6   | .3    | .0  |      | 11.7      | 14.2     |          | 13.7       | 11.2  | 13.4  | 11.0  | 11.3  | 10.6  | 10.3  | 10.2  |
| S        | .5                 | 4.9  | 6.7   | 2.5   | .5    | .1  |      | 15.1      | 15.2     |          | 18.5       | 12.3  | 15.1  | 11.6  | 10.0  | 14.7  | 15.9  | 11.1  |
| SW       | .4                 | 4.6  | 7.6   | 3.0   | .5    | .1  |      | 16.2      | 15.9     |          | 14.6       | 18.1  | 15.3  | 15.3  | 14.7  | 15.9  | 18.0  | 19.6  |
| W        | .4                 | 4.5  | 6.0   | 3.0   | 1.3   | .7  |      | 15.3      | 17.6     |          | 13.6       | 18.0  | 15.8  | 14.0  | 15.5  | 16.6  | 14.4  | 16.4  |
| NW       | .4                 | 3.1  | 4.5   | 2.8   | 1.0   | .1  |      | 11.9      | 17.8     |          | 9.8        | 15.0  | 12.3  | 16.7  | 10.6  | 12.3  | 10.9  | 12.8  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.6                |      |       |       |       |     |      | 1.6       | .0       |          | 1.3        | 2.4   | 2.1   | 2.8   | .4    | 2.7   | .9    | 1.9   |
| TOT OBS  | 208                | 1369 | 1811  | 729   | 187   | 25  | 4329 |           | 15.4     |          | 633        | 291   | 841   | 318   | 679   | 329   | 915   | 323   |
| TOT PCT  | 4.8                | 31.6 | 41.6  | 16.8  | 4.3   | .6  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 4A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |      |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 1.6                | 3.5  | 2.5   | .9    | .2  |      | 8.6       | 15.6     |          | 7.7        | 9.0   | 8.5   | 9.0   |    |
| NE       | 1.4                | 4.6  | 2.1   | .5    | .0  |      | 8.6       | 13.5     |          | 8.5        | 6.9   | 9.4   | 9.6   |    |
| E        | 1.7                | 5.9  | 2.8   | .7    | .0  |      | 11.0      | 13.6     |          | 10.7       | 10.7  | 12.3  | 10.6  |    |
| SE       | 1.8                | 6.0  | 3.0   | .8    | .1  |      | 11.7      | 14.2     |          | 12.9       | 12.8  | 11.0  | 10.3  |    |
| S        | 2.1                | 7.4  | 4.2   | 1.2   | .2  |      | 15.1      | 15.2     |          | 16.6       | 14.2  | 15.6  | 14.6  |    |
| SW       | 2.0                | 7.1  | 5.6   | 1.3   | .2  |      | 16.2      | 15.9     |          | 15.7       | 15.3  | 15.1  | 18.4  |    |
| W        | 2.0                | 6.1  | 4.3   | 2.4   | .5  |      | 15.3      | 17.6     |          | 15.0       | 15.3  | 15.8  | 14.9  |    |
| NW       | 1.4                | 4.7  | 3.7   | 1.7   | .4  |      | 11.9      | 17.8     |          | 11.4       | 13.5  | 11.2  | 11.4  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 1.6                |      |       |       |     |      | 1.6       | .0       |          | 1.6        | 2.3   | 1.2   | 1.1   |    |
| TOT OBS  | 675                | 1960 | 1219  | 407   | 68  | 4329 |           | 15.4     |          | 924        | 1159  | 1008  | 1238  |    |
| TOT PCT  | 15.6               | 45.3 | 28.2  | 9.4   | 1.6 |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND  | 000 | 150 | 300   | 450   | 600  | 750  | 900 | 1050 | 1200  | 1350 | 1500 | 1650 | 1800 | 1950 | TOTAL |
|-------|-----|-----|-------|-------|------|------|-----|------|-------|------|------|------|------|------|-------|
| DIR   | 000 | 150 | 300   | 450   | 600  | 750  | 900 | 1050 | 1200  | 1350 | 1500 | 1650 | 1800 | 1950 | OBS   |
| 00003 | 1.6 | 3.7 | 30.5  | 42.0  | 17.5 | 4.3  | .3  | 15.3 | 100.0 |      |      |      |      |      | 924   |
| 06009 | 2.3 | 3.2 | 33.8  | 39.9  | 16.1 | 4.3  | .3  | 14.9 | 100.0 |      |      |      |      |      | 1159  |
| 12015 | 1.2 | 2.9 | 29.4  | 43.8  | 17.5 | 4.3  | 1.0 | 16.0 | 100.0 |      |      |      |      |      | 1008  |
| 18021 | 1.1 | 3.2 | 32.2  | 41.9  | 16.5 | 4.4  | .6  | 15.3 | 100.0 |      |      |      |      |      | 1238  |
| TOT   | 68  | 140 | 136.9 | 181.1 | 72.9 | 18.7 | .75 | 15.4 |       |      |      |      |      |      | 4329  |
| PCT   | 1.6 | 3.2 | 31.6  | 41.8  | 16.8 | 4.3  | .6  | 15.4 | 100.0 |      |      |      |      |      |       |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-6  | TOTAL | MEAN  |
|----------|------|------|------|------|-------|-------|
|          | OBS  | OBS  | OBS  | OBS  | OBS   | COVER |
| N        | .7   | 1.8  | 4.1  | 2.3  |       | 5.6   |
| NE       | .7   | 1.7  | 4.3  | 2.3  |       | 5.7   |
| E        | 1.8  | 2.9  | 5.0  | 3.3  |       | 5.3   |
| SE       | 1.9  | 2.1  | 4.4  | 3.7  |       | 5.5   |
| S        | 2.4  | 2.1  | 5.7  | 6.1  |       | 5.7   |
| SW       | 2.2  | 2.3  | 6.2  | 4.4  |       | 5.6   |
| W        | 3.0  | 2.7  | 5.3  | 3.3  |       | 4.9   |
| NW       | 1.5  | 2.4  | 3.5  | 2.6  |       | 5.2   |
| VAR      | .0   | .0   | .0   | .0   |       | .0    |
| CALM     | .2   | .2   | .1   | .6   |       | 5.9   |
| TOT OBS  | 326  | 410  | 867  | 643  |       | 2246  |
| TOT PCT  | 14.5 | 18.3 | 38.6 | 28.6 |       | 100.0 |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 450  | 600  | 750  | 900  | 1050 | 1200 | 1350 | 1500 | 1650 | 1800 | 1950 | TOTAL |
|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 149 | 299 | 599 | 899  | 1199 | 1499 | 1799 | 2099 | 2399 | 2699 | 2999 | 3299 | 3599 | 3899 | OBS   |
| .1  | .0  | .2  | 1.6  | 2.1  | 1.0  | .3   | .1   | *    | *    | 3.6  |      |      |      |       |
| .0  | .0  | .2  | .6   | 2.0  | 1.9  | .6   | .2   | .0   | *    | 3.4  |      |      |      |       |
| *   | *   | .1  | 1.7  | 2.7  | 1.7  | .3   | .1   | *    | *    | 6.3  |      |      |      |       |
| .0  | .1  | .4  | 1.1  | 2.4  | 1.6  | .4   | .1   | .0   | *    | 6.0  |      |      |      |       |
| *   | *   | .4  | 2.0  | 4.1  | 1.7  | .6   | .2   | .0   | *    | 7.2  |      |      |      |       |
| .1  | *   | .2  | 2.3  | 2.9  | 1.6  | .9   | .1   | .1   | *    | 6.7  |      |      |      |       |
| .1  | .1  | .3  | 1.6  | 2.2  | 1.1  | .5   | .1   | .0   | *    | 8.2  |      |      |      |       |
| .0  | .0  | .5  | 1.0  | 1.6  | 1.0  | .4   | *    | .0   | *    | 5.5  |      |      |      |       |
| .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   |      |      |      |       |
| .0  | .0  | .0  | *    | .1   | .4   | .0   | .0   | .0   | .0   | .4   |      |      |      |       |
| .9  | .6  | .52 | .266 | .454 | .269 | .87  | .19  | .4   | .13  | 1067 |      |      |      | 2246  |
| .4  | .3  | 2.3 | 11.8 | 20.2 | 12.0 | 3.9  | .8   | .2   | .6   | 47.5 |      |      |      | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | * OR >10 | * OR >5 | * OR >2 | * OR >1 | * OR >1/2 | * OR >1/4 | * OR >50YD | * OR >0 |
|----------------|----------|---------|---------|---------|-----------|-----------|------------|---------|
| * OR >6500     | .6       | .7      | .7      | .7      | .7        | .7        | .7         | .7      |
| * OR >5000     | 1.3      | 1.5     | 1.6     | 1.6     | 1.6       | 1.6       | 1.6        | 1.6     |
| * OR >3500     | 4.3      | 5.2     | 5.4     | 5.5     | 5.5       | 5.5       | 5.5        | 5.5     |
| * OR >2000     | 14.3     | 17.0    | 17.4    | 17.5    | 17.5      | 17.5      | 17.5       | 17.5    |
| * OR >1000     | 30.7     | 37.0    | 37.7    | 37.8    | 37.8      | 37.8      | 37.8       | 37.8    |
| * OR >600      | 38.0     | 48.1    | 49.5    | 49.6    | 49.6      | 49.6      | 49.6       | 49.6    |
| * OR >300      | 39.2     | 50.1    | 51.8    | 51.9    | 51.9      | 51.9      | 51.9       | 51.9    |
| * OR >150      | 39.3     | 50.2    | 52.0    | 52.2    | 52.2      | 52.2      | 52.2       | 52.2    |
| * OR >0        | 39.3     | 50.4    | 52.2    | 52.5    | 52.6      | 52.6      | 52.6       | 52.6    |
| TOTAL          | 894      | 1145    | 1187    | 1193    | 1194      | 1195      | 1195       | 1195    |

TOTAL NUMBER OF OBS: 2272

PCT FREQ NH <5/8: 47.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4    | 5   | 6    | 7    | 8    | OBSCD | TOTAL |
|-----|-----|------|------|------|-----|------|------|------|-------|-------|
| 5.9 | 6.5 | 11.1 | 12.3 | 11.6 | 9.2 | 11.0 | 11.3 | 20.8 | .2    | 2427  |



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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|-----|------|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0  | .0   | *    | .0   | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | *    | .0  | .0   | *    | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %  | *    | .0  | .0   | .1   | .0   | *    | .0   | .0   | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0  | .1   | *    | .2   | .0   | .0   | .0   | .0  | .0   | .3    |              |
|              | TOT %  | .0   | .0  | .1   | *    | .2   | .0   | .0   | .0   | .0  | .0   | .3    |              |
| 1<2          | PCP    | .0   | *   | .0   | *    | *    | .1   | *    | *    | .0  | .0   | .3    |              |
|              | NO PCP | .0   | .0  | .0   | .0   | .0   | *    | .1   | .0   | .0  | .0   | .1    |              |
|              | TOT %  | .0   | *   | .0   | *    | *    | .1   | .1   | *    | .0  | .0   | .3    |              |
| 2<5          | PCP    | .1   | .0  | .2   | .2   | .1   | .1   | .1   | .2   | .0  | *    | 1.0   |              |
|              | NO PCP | .1   | .1  | .1   | .3   | .2   | .3   | .3   | .1   | .0  | .0   | 1.6   |              |
|              | TOT %  | .2   | .1  | .3   | .5   | .4   | .4   | .4   | .3   | .0  | *    | 2.6   |              |
| 5<10         | PCP    | .2   | .2  | .4   | .5   | .5   | 1.0  | .6   | .5   | .0  | .0   | 3.8   |              |
|              | NO PCP | 1.7  | 1.1 | 1.8  | 2.0  | 3.1  | 3.3  | 2.5  | 1.7  | .0  | .2   | 17.4  |              |
|              | TOT %  | 1.9  | 1.3 | 2.2  | 2.5  | 3.6  | 4.3  | 3.2  | 2.2  | .0  | .2   | 21.3  |              |
| 10+          | PCP    | .3   | .2  | .3   | .2   | .3   | .5   | .3   | .3   | .0  | .0   | 2.3   |              |
|              | NO PCP | 6.5  | 7.0 | 10.2 | 9.1  | 11.4 | 10.4 | 10.0 | 7.4  | .0  | 1.0  | 73.0  |              |
|              | TOT %  | 6.8  | 7.2 | 10.5 | 9.2  | 11.7 | 10.9 | 10.3 | 7.7  | .0  | 1.0  | 75.4  |              |
| TOT OBS      |        | 2860 |     |      |      |      |      |      |      |     |      |       |              |
| TOT PCT      |        | 8.9  | 8.6 | 13.1 | 12.3 | 15.7 | 16.0 | 14.0 | 10.2 | .0  | 1.2  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|-----|------|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0  | .0   | .0   | .0   | *    | .0   | .0   | .0  | *    | .1    |              |
|              | 4-10       | *    | .0  | .0   | *    | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0  | .0   | .0   | .0   | *    | *    | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0  | .0   | *    | .0   | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | *    | .0  | .0   | .1   | .0   | .1   | *    | .0   | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | .0   | .0  | .0   | .0   | .0   | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | .0  | .1   | .0   | .0   | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .1  | *    | *    | .0   | .1   | *    | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0  | .0   | *    | *    | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0   | .1  | .1   | *    | *    | .2   | *    | .0   | .0  | .0   | .4    |              |
| 1<2          | 0-3        | .0   | .0  | *    | .0   | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | .0  | *    | *    | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .1  | .0   | .0   | .0   | .1   | .1   | .0   | .0  | .0   | .2    |              |
|              | 22+        | *    | .1  | .0   | .0   | .1   | .1   | .1   | *    | .0  | .0   | .3    |              |
|              | TOT %      | *    | .1  | .1   | *    | .1   | .1   | .1   | *    | .0  | .0   | .5    |              |
| 2<5          | 0-3        | .0   | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .1   | .1    |              |
|              | 4-10       | .1   | .1  | .2   | .1   | *    | *    | .1   | .1   | .0  | .0   | .7    |              |
|              | 11-21      | *    | .1  | .1   | .2   | .2   | .3   | .2   | .1   | .0  | .0   | 1.3   |              |
|              | 22+        | .1   | .0  | .1   | .3   | .2   | .3   | .2   | .1   | .0  | .0   | 1.4   |              |
|              | TOT %      | .3   | .2  | .4   | .6   | .4   | .7   | .5   | .3   | .0  | .1   | 3.4   |              |
| 5<10         | 0-3        | *    | *   | .1   | *    | *    | *    | .1   | .1   | .0  | .2   | .5    |              |
|              | 4-10       | .4   | .5  | .7   | .5   | .8   | .9   | .5   | .3   | .0  | .0   | 4.6   |              |
|              | 11-21      | .6   | .6  | .9   | 1.1  | 1.4  | 2.0  | 1.5  | 1.0  | .0  | .0   | 9.1   |              |
|              | 22+        | .7   | .3  | .6   | .8   | 1.3  | 1.4  | 1.3  | 1.2  | .0  | .0   | 7.5   |              |
|              | TOT %      | 1.8  | 1.3 | 2.2  | 2.5  | 3.5  | 4.3  | 3.4  | 2.6  | .0  | .2   | 21.8  |              |
| 10+          | 0-3        | .4   | .2  | .3   | .2   | .5   | .3   | .2   | .3   | .0  | 1.2  | 3.5   |              |
|              | 4-10       | 2.3  | 2.9 | 2.7  | 3.7  | 3.9  | 3.8  | 3.6  | 2.4  | .0  | .0   | 26.3  |              |
|              | 11-21      | 2.9  | 3.1 | 4.4  | 4.3  | 5.4  | 5.2  | 4.0  | 3.0  | .0  | .0   | 32.4  |              |
|              | 22+        | 1.1  | .8  | 1.1  | .7   | 1.4  | 1.7  | 2.6  | 2.2  | .0  | .0   | 11.5  |              |
|              | TOT %      | 6.7  | 7.0 | 9.5  | 9.0  | 11.1 | 11.0 | 10.4 | 7.8  | .0  | 1.2  | 73.7  |              |
| TOT OBS      |            | 3497 |     |      |      |      |      |      |      |     |      |       |              |
| TOT PCT      |            | 8.9  | 8.7 | 12.2 | 12.2 | 15.1 | 16.3 | 14.4 | 10.7 | .0  | 1.5  | 100.0 |              |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|------|------|------|------|------|------|-------|-------|--------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                    |              |
| 00003 | .4  | .2  | 1.2 | 12.4 | 21.4 | 8.1  | 3.0  | .7   | .4   | .2    | 48.0  | 52.0               | 565          |
| 06009 | .2  | .6  | 3.0 | 10.7 | 19.7 | 12.7 | 3.2  | .6   | .4   | .6    | 51.7  | 48.3               | 497          |
| 12015 | .3  | .0  | 2.4 | 11.1 | 18.2 | 12.2 | 4.1  | .9   | .0   | .9    | 50.2  | 49.8               | 658          |
| 18021 | .6  | .3  | 2.2 | 11.8 | 19.7 | 13.5 | 4.3  | 1.1  | .0   | .5    | 54.1  | 45.9               | 629          |
| TOT   | 9   | 6   | 52  | 270  | 463  | 274  | 87   | 70   | 4    | 13    | 1198  | 1151               | 2349         |
| PCT   | .4  | .3  | 2.2 | 11.5 | 19.7 | 11.7 | 3.7  | .9   | .2   | .6    | 51.0  | 49.0               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|-------|------|-------|-----|-----|------|------|--------------|
| (GMT) |      |       |     |     |      |      |              |
| 00003 | .0   | .1    | .5  | 3.5 | 20.8 | 75.1 | 806          |
| 06009 | .3   | .6    | .4  | 3.0 | 23.6 | 72.1 | 903          |
| 12015 | .3   | .5    | .6  | 3.1 | 20.0 | 75.5 | 865          |
| 18021 | .1   | .5    | .7  | 3.7 | 22.3 | 72.7 | 970          |
| TOT   | 7    | 15    | 20  | 118 | 770  | 2614 | 3544         |
| PCT   | .2   | .4    | .6  | 3.3 | 21.7 | 73.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HR    | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|-------|---------------|------------|-------------|-----------------|-------------------|--------------|
| (GMT) |               |            |             |                 |                   |              |
| 00003 | .4            | 1.9        | 15.9        | 35.1            | 49.1              | 536          |
| 06009 | .2            | 3.9        | 15.3        | 37.7            | 47.0              | 483          |
| 12015 | .3            | 2.8        | 15.9        | 35.7            | 48.4              | 642          |
| 18021 | .7            | 3.4        | 16.2        | 39.6            | 44.2              | 611          |
| TOT   | 9             | 68         | 360         | 841             | 1071              | 2272         |
| PCT   | .4            | 3.0        | 15.8        | 37.0            | 47.1              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 70/74  | .0   | .0    | .0    | .1    | .1    | .2    | .2    | *      | 15           | .6          |
| 65/69  | .0   | .0    | .1    | .2    | .8    | 3.4   | 7.7   | 9.1    | 523          | 21.2        |
| 60/64  | .0   | .0    | .4    | 2.2   | 7.7   | 16.0  | 19.8  | 14.9   | 1506         | 61.0        |
| 55/59  | .0   | .0    | .0    | .7    | 4.0   | 4.7   | 5.1   | 1.7    | 401          | 16.2        |
| 50/54  | .0   | .0    | .0    | .0    | .1    | .3    | .3    | .2     | 23           | .9          |
| TOTAL  | 0    | 0     | 11    | 78    | 315   | 607   | 815   | 642    | 2468         | 100.0       |
| PCT    | .0   | .0    | .4    | 3.2   | 12.8  | 24.6  | 33.0  | 26.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N   | NE  | E    | SE   | S    | SW   | W    | NW   | VAR | CALM |
|-----|-----|------|------|------|------|------|------|-----|------|
| *   | .0  | .1   | .1   | .2   | *    | .1   | .1   | .0  | *    |
| .5  | .7  | 1.7  | 2.3  | 6.4  | 5.7  | 3.2  | .7   | .0  | .1   |
| 3.6 | 6.0 | 10.2 | 9.4  | 9.0  | 8.9  | 8.1  | 4.9  | .0  | 1.0  |
| 3.3 | 2.0 | 1.9  | 1.0  | .4   | 1.0  | 2.3  | 4.2  | .0  | .2   |
| .3  | .1  | .1   | .0   | .0   | *    | .2   | .2   | .0  | .0   |
| 7.7 | 8.8 | 13.9 | 12.8 | 16.0 | 15.6 | 13.8 | 10.0 | .0  | 1.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|----|----|-----|------|--------------|
| (GMT) |     |     |     |     |    |    |     |      |              |
| 00003 | 70  | 68  | 66  | 62  | 57 | 54 | 51  | 61.5 | 922          |
| 06009 | 69  | 67  | 65  | 61  | 56 | 53 | 50  | 61.2 | 1155         |
| 12015 | 77  | 70  | 68  | 63  | 58 | 55 | 50  | 63.0 | 990          |
| 18021 | 74  | 69  | 67  | 62  | 57 | 55 | 50  | 62.3 | 1213         |
| TOT   | 77  | 69  | 67  | 62  | 57 | 54 | 50  | 62.0 | 4280         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|-------|------|-------|-------|-------|-------|--------|------|--------------|
| (GMT) |      |       |       |       |       |        |      |              |
| 00003 | .0   | 2.7   | 11.1  | 24.5  | 35.5  | 26.2   | 82   | 603          |
| 06009 | .0   | 2.5   | 12.2  | 24.7  | 34.3  | 26.4   | 82   | 607          |
| 12015 | .0   | 5.2   | 15.1  | 25.2  | 29.4  | 25.2   | 80   | 656          |
| 18021 | .0   | 4.2   | 12.2  | 24.6  | 33.2  | 25.7   | 81   | 638          |
| TOT   | 0    | 92    | 318   | 620   | 827   | 647    | 81   | 2504         |

PERIOD: (PRIMARY) 1926-1972  
(OVER-ALL) 1855-1972

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 9/10               | .0       | .0       | .0       | *        | .0       | *        | *        | 3     | .0       | .1        |
| 7/8                | .0       | .0       | .1       | .0       | .2       | .3       | *        | 15    | *        | .5        |
| 6                  | .0       | .0       | .0       | .0       | .2       | .1       | .0       | 8     | .0       | .3        |
| 5                  | .0       | .0       | .0       | .1       | .6       | .3       | .0       | 26    | *        | 1.0       |
| 4                  | .0       | .0       | .0       | .7       | 1.2      | .1       | .0       | 51    | *        | 2.0       |
| 3                  | .0       | .0       | .1       | 1.4      | 2.2      | *        | .0       | 94    | .1       | 3.6       |
| 2                  | .0       | *        | .2       | 3.3      | 3.4      | .2       | .0       | 181   | .1       | 7.0       |
| 1                  | .0       | .0       | .4       | 6.8      | 4.8      | *        | .0       | 308   | .4       | 11.7      |
| 0                  | .0       | .1       | 1.5      | 9.9      | 2.8      | .0       | .0       | 364   | .4       | 13.9      |
| -1                 | .0       | .0       | 2.5      | 11.1     | 1.9      | .0       | .0       | 394   | .4       | 15.1      |
| -2                 | .0       | .1       | 4.6      | 7.0      | .9       | .0       | .0       | 321   | .1       | 12.5      |
| -3                 | .0       | .1       | 4.7      | 4.0      | .5       | .0       | .0       | 238   | .0       | 9.3       |
| -4                 | .0       | .4       | 4.2      | 2.8      | .1       | .0       | .0       | 192   | *        | 7.5       |
| -5                 | .0       | .6       | 2.9      | 1.4      | .2       | .0       | .0       | 131   | .0       | 5.1       |
| -6                 | .0       | .5       | 2.1      | .5       | *        | .0       | .0       | 81    | .0       | 3.2       |
| -7/-8              | .2       | 1.0      | 1.8      | .5       | *        | .0       | .0       | 89    | .0       | 3.5       |
| -9/-10             | .1       | .4       | .4       | .1       | .0       | .0       | .0       | 26    | .0       | 1.0       |
| -11/-13            | .2       | .4       | .2       | *        | .0       | .0       | .0       | 20    | .0       | .8        |
| -14/-16            | *        | .1       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | .1        |
| TOTAL              | 12       |          | 655      |          | 489      |          | 3        | 2546  | 42       | 2504      |
| PCT                | .5       | 3.7      | 25.7     | 49.7     | 19.2     | 1.1      | .1       | 100.0 | 1.6      | 98.4      |

PERIOD: (OVER-ALL) 1963-1972

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .2   | .0    | .0    | .0    | .0  | .5  | .1  | .4   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .0  | 1.4  | .4    | .0    | .0    | .0  | 1.8 | .0  | 1.6  | .5    | .0    | .0    | .0  | 2.1 |
| 3-4     | .0  | .7   | .7    | .0    | .0    | .0  | 1.4 | .0  | 1.5  | 1.7   | .1    | .0    | .0  | 3.2 |
| 5-6     | .0  | .1   | .8    | .0    | .0    | .0  | .9  | .0  | .0   | 1.0   | .1    | .0    | .0  | 1.1 |
| 7       | .0  | .1   | .4    | .5    | .0    | .0  | 1.0 | .0  | .1   | .4    | .3    | *     | .0  | .9  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | *     | .3    | .0    | .0  | .3  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 13-16   | .0  | .0   | .1    | .2    | .1    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 2.5  | 2.7   | .7    | .1    | .0  | 6.3 | .1  | 3.6  | 3.7   | 1.0   | *     | .0  | 8.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .1  | .6   | .0    | .0    | .0    | .0  | .7   | .0  | 1.0  | .0    | .0    | .0    | .0  | 1.0  |
| 1-2     | .2  | 3.6  | 1.6   | .0    | .0    | .0  | 5.4  | .1  | 1.9  | .7    | .0    | .0    | .0  | 2.7  |
| 3-4     | .0  | 1.1  | 2.4   | .4    | .0    | .0  | 3.9  | .0  | 1.6  | 3.0   | .1    | .0    | .0  | 4.7  |
| 5-6     | .0  | .3   | 2.0   | .8    | .0    | .0  | 3.1  | .0  | .2   | 3.0   | .4    | .1    | .0  | 3.7  |
| 7       | .0  | .1   | 1.3   | .9    | .1    | .0  | 2.3  | .0  | .1   | .4    | 1.2   | .0    | .0  | 1.7  |
| 8-9     | .0  | .0   | .2    | .4    | .0    | .0  | .6   | .0  | .1   | .1    | .4    | .0    | .0  | .7   |
| 10-11   | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | .0   | *     | .2    | .0    | .0  | .3   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0   | .0    | .0    | .2    | *   | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .2    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 5.7  | 7.7   | 2.8   | .3    | .0  | 16.7 | .1  | 4.9  | 7.3   | 2.5   | .3    | *   | 15.1 |



PERIOD: (OVER-ALL) 1963-1972

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TABLE 18 (CONT)AREA 0001 AZORES  
38.0N 26.6W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .4   | .1    | .0    | .0    | .0  | .8   | .2  | .6   | .0    | .0    | .0    | .0  | .7   |
| 1-2     | .2  | 1.8  | 1.5   | .0    | .0    | .0  | 3.5  | *   | 3.3  | .8    | .0    | .0    | .0  | 4.1  |
| 3-4     | .1  | 1.2  | 3.2   | .4    | .0    | .0  | 5.0  | .0  | 1.5  | 2.3   | .2    | .0    | .0  | 4.1  |
| 5-6     | .0  | .8   | 1.7   | .7    | .0    | .0  | 3.2  | .0  | .5   | 2.6   | 1.1   | .0    | .0  | 4.2  |
| 7       | .0  | .0   | .8    | 1.0   | .0    | .1  | 1.9  | .0  | .1   | 1.3   | .3    | .0    | *   | 1.7  |
| 8-9     | .0  | .0   | .5    | .6    | .1    | .0  | 1.2  | .0  | .0   | .6    | .3    | .0    | .0  | 1.0  |
| 10-11   | .0  | .0   | .0    | .2    | .1    | .0  | .3   | .0  | .0   | .0    | .0    | *     | .0  | *    |
| 12      | .0  | .0   | .0    | .2    | .3    | .0  | .4   | .0  | .0   | .0    | .1    | *     | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .3    | .2    | .2  | .7   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0   | .0    | *     | .1    | .0  | .1   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .5  | 4.3  | 7.8   | 3.6   | .7    | .3  | 17.1 | .2  | 6.0  | 7.5   | 2.2   | .2    | .1  | 16.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .4   | .0    | .0    | .0    | .0  | .5   | .1  | *    | .1    | .0    | .0    | .0  | .2  |           |
| 1-2     | .0  | 1.3  | .7    | .0    | .0    | .0  | 2.0  | .0  | 1.3  | .9    | .0    | .0    | .0  | 2.2 |           |
| 3-4     | .1  | 1.1  | 2.1   | .1    | .0    | .0  | 3.3  | .0  | .6   | .5    | .0    | .0    | .0  | 1.1 |           |
| 5-6     | .0  | .6   | 1.4   | .3    | .1    | .0  | 2.3  | .0  | .2   | .7    | .2    | *     | .0  | 1.0 |           |
| 7       | .0  | .1   | .8    | 1.0   | .0    | .0  | 1.9  | .0  | .0   | .7    | .6    | .0    | .0  | 1.3 |           |
| 8-9     | .0  | .0   | .3    | .1    | .0    | .0  | .4   | .0  | .0   | .3    | .1    | .0    | .0  | .5  |           |
| 10-11   | .0  | .0   | .2    | .3    | .2    | .0  | .7   | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .2    | .1    | .0  | .3  |           |
| 13-16   | .0  | .0   | .0    | .1    | .3    | .0  | .4   | .0  | .0   | *     | .1    | .3    | .0  | .4  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | .0  | .1  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | 3.5  | 5.4   | 1.8   | .7    | .0  | 11.6 | .1  | 2.1  | 3.3   | 1.2   | .6    | .0  | 7.2 | 98.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.7 | 3.9  | .2    | .0    | .0    | .0  | 6.8   |         |
| 1-2     | .6  | 16.4 | 6.9   | .0    | .0    | .0  | 23.9  |         |
| 3-4     | .2  | 9.2  | 15.7  | 1.2   | .0    | .0  | 26.4  |         |
| 5-6     | .0  | 2.7  | 12.9  | 3.5   | .2    | .0  | 19.3  |         |
| 7       | .0  | .6   | 6.0   | 5.8   | .1    | .1  | 12.5  |         |
| 8-9     | .0  | .1   | 2.3   | 2.2   | .1    | .0  | 4.6   |         |
| 10-11   | .0  | .0   | .7    | 1.0   | .3    | .0  | 2.1   |         |
| 12      | .0  | .0   | .0    | .6    | .4    | .0  | 1.0   |         |
| 13-16   | .0  | .0   | .1    | .9    | 1.1   | .2  | 2.4   |         |
| 17-19   | .0  | .0   | .0    | .0    | .3    | .1  | .4    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .2    | .2    | .0  | .4    |         |
| 26-32   | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 3.5 | 33.0 | 44.8  | 15.5  | 2.8   | .4  | 100.0 | 973     |

PERIOD: (OVER-ALL) 1949-1972

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.0 | 6.7 | 10.9 | 6.0  | 2.0  | 1.1  | .2    | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 548   | 4        |
| 6-7          | .0  | .8  | 5.4  | 8.4  | 5.3  | 2.3  | 2.2   | .8  | .7    | .0    | .0    | .1    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 508   | 6        |
| 8-9          | .0  | .5  | 1.3  | 2.5  | 3.4  | 3.0  | 1.7   | 1.2 | 1.5   | .1    | .2    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 303   | 8        |
| 10-11        | .0  | .2  | .3   | 1.1  | 1.5  | 2.4  | 1.2   | .8  | 1.8   | .7    | .1    | .1    | .4    | .0    | .0    | .0    | .0    | .0    | .0  | 206   | 10       |
| 12-13        | .0  | .0  | .8   | .3   | .4   | .3   | .6    | .7  | .7    | .2    | .1    | .2    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 84    | 10       |
| >13          | .0  | .0  | .0   | .1   | .5   | .4   | .2    | .2  | .2    | .1    | .1    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 35    | 11       |
| INDET        | 1.5 | 1.6 | 3.6  | 1.8  | 2.4  | 1.1  | .8    | .1  | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 264   | 5        |
| TOTAL        | 49  | 191 | 435  | 395  | 300  | 206  | 133   | 76  | 110   | 20    | 7     | 8     | 18    | 0     | 0     | 0     | 0     | 0     | 0   | 1948  | 6        |
| PCT          | 2.5 | 9.8 | 22.3 | 20.3 | 15.4 | 10.6 | 6.8   | 3.9 | 5.6   | 1.0   | .4    | .4    | .9    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

ANNUAL

AREA 0001 AIDRES  
38.0N 26.7W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR       | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|                | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N              | 1.7                | 2.1       | 1.7  | .0        | .0   | .0              | .0   | 5.3                     | 4.5            | .1        | .9          | *                   | .4         | .1              | 88.7       |
| NE             | 1.5                | 1.4       | 1.6  | .0        | .0   | .0              | .0   | 4.4                     | 3.3            | .2        | .5          | .0                  | .5         | *               | 91.1       |
| E              | 2.0                | 1.7       | 2.1  | .0        | .0   | .0              | .0   | 5.6                     | 3.5            | .1        | .6          | .0                  | .9         | .1              | 89.2       |
| SE             | 3.4                | 1.7       | 2.0  | .0        | .0   | .0              | .0   | 6.9                     | 4.5            | .2        | 1.1         | .0                  | 1.1        | .0              | 86.3       |
| S              | 3.2                | 2.1       | 2.7  | .0        | .0   | .0              | .0   | 7.8                     | 4.2            | .4        | 1.3         | *                   | 1.4        | *               | 84.9       |
| SW             | 3.4                | 2.4       | 2.7  | .0        | .0   | .0              | *    | 8.3                     | 4.6            | .5        | 1.4         | *                   | 1.4        | .1              | 83.7       |
| W              | 2.2                | 2.2       | 1.9  | .0        | .0   | .0              | *    | 6.1                     | 4.8            | .6        | 1.2         | .1                  | 1.4        | *               | 85.9       |
| NW             | 1.7                | 2.4       | 1.6  | .0        | .0   | .0              | .1   | 5.6                     | 4.6            | .3        | .8          | *                   | .6         | *               | 88.1       |
| VAR            | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM           | .7                 | .1        | 1.1  | .0        | .0   | .0              | .0   | 1.9                     | 1.1            | .1        | 1.4         | .3                  | 2.0        | .0              | 93.2       |
| TOT PCT        | 2.4                | 2.0       | 2.1  | .0        | .0   | .0              | *    | 6.3                     | 4.3            | .4        | 1.0         | *                   | 1.0        | *               | 86.9       |
| TOT OBS: 32873 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT)     | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|                | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003          | 2.4                | 1.9       | 2.3  | .0        | .0   | .0              | *    | 6.5                     | 4.5            | .7        | .7          | *                   | .9         | *               | 86.8       |
| 06009          | 2.7                | 2.2       | 2.6  | .0        | .0   | .0              | .0   | 7.3                     | 4.8            | .6        | 1.2         | *                   | .9         | *               | 85.1       |
| 12015          | 2.2                | 2.0       | 1.7  | .0        | .0   | .0              | *    | 5.8                     | 4.2            | *         | 1.1         | *                   | 1.1        | *               | 87.8       |
| 18021          | 2.2                | 2.0       | 1.6  | .0        | .0   | .0              | *    | 5.7                     | 3.7            | .1        | 1.2         | *                   | 1.2        | *               | 88.1       |
| TOT PCT        | 2.4                | 2.0       | 2.0  | .0        | .0   | .0              | *    | 6.3                     | 4.3            | .4        | 1.1         | *                   | 1.0        | *               | 87.0       |
| TOT OBS: 33504 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|--|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .8                 | 4.8  | 4.4   | 1.2   | .3    | *   |  | 11.5      | 13.3     |          | 11.7       | 11.1  | 11.8  | 12.3  | 11.0  | 12.1  | 11.1  | 11.8  |
| NE       | .6                 | 5.2  | 4.3   | .9    | .1    | *   |  | 11.1      | 12.5     |          | 10.7       | 10.9  | 10.5  | 11.7  | 11.2  | 11.5  | 11.5  | 12.1  |
| E        | .7                 | 4.4  | 3.5   | .7    | .1    | *   |  | 9.4       | 11.6     |          | 9.3        | 9.2   | 8.8   | 9.0   | 10.2  | 9.1   | 9.6   | 9.0   |
| SE       | .5                 | 3.5  | 3.1   | .8    | .1    | *   |  | 8.0       | 11.9     |          | 8.2        | 7.7   | 7.6   | 7.3   | 8.0   | 8.1   | 8.3   | 7.9   |
| S        | .7                 | 4.2  | 4.8   | 1.6   | .3    | *   |  | 11.6      | 13.2     |          | 12.4       | 10.3  | 11.6  | 9.9   | 12.2  | 11.4  | 11.8  | 10.3  |
| SW       | .7                 | 5.4  | 6.7   | 2.6   | .5    | *   |  | 15.9      | 14.2     |          | 15.5       | 16.5  | 16.0  | 16.0  | 16.1  | 16.2  | 15.6  | 15.3  |
| W        | .9                 | 5.8  | 6.4   | 2.5   | .6    | .1  |  | 16.2      | 14.6     |          | 16.4       | 15.8  | 16.7  | 15.7  | 17.0  | 15.2  | 16.0  | 15.3  |
| NW       | .7                 | 5.0  | 5.0   | 2.0   | .5    | .1  |  | 13.3      | 14.4     |          | 12.3       | 15.0  | 13.2  | 14.4  | 12.3  | 13.9  | 13.3  | 14.6  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |  | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.0                |      |       |       |       |     |  | 3.0       | .0       |          | 3.3        | 3.5   | 3.7   | 3.8   | 1.9   | 2.4   | 2.6   | 3.7   |
| TOT OBS  |                    |      |       |       |       |     |  | 49320     | 13.1     |          | 7689       | 3038  | 9985  | 3254  | 8102  | 3390  | 10562 | 3300  |
| TOT PCT  | 8.7                | 38.3 | 38.1  | 12.3  | 2.4   | .2  |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|----|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |     |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 2.7                | 5.7  | 2.5   | .6    | .1 |     |           | 11.5     | 13.3     | 11.6       | 11.9  | 11.3  | 11.3  |    |
| NE       | 2.7                | 6.0  | 2.0   | .4    | *  |     |           | 11.1     | 12.5     | 10.8       | 10.8  | 11.3  | 11.7  |    |
| E        | 2.5                | 5.0  | 1.6   | .3    | *  |     |           | 9.4      | 11.6     | 9.3        | 8.8   | 9.9   | 9.5   |    |
| SE       | 1.8                | 4.1  | 1.7   | .4    | *  |     |           | 8.0      | 11.9     | 8.1        | 7.6   | 8.0   | 8.2   |    |
| S        | 2.2                | 5.6  | 3.0   | .7    | .1 |     |           | 11.6     | 13.2     | 11.8       | 11.2  | 12.0  | 11.5  |    |
| SW       | 2.6                | 7.5  | 4.4   | 1.2   | .1 |     |           | 15.9     | 14.2     | 15.8       | 16.0  | 16.2  | 15.5  |    |
| W        | 3.1                | 7.3  | 4.3   | 1.3   | .2 |     |           | 16.2     | 14.6     | 16.2       | 16.5  | 16.5  | 15.9  |    |
| NW       | 2.7                | 6.1  | 3.2   | 1.1   | .2 |     |           | 13.3     | 14.4     | 13.1       | 13.5  | 12.8  | 13.6  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0 |     |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.0                |      |       |       |    |     |           | 3.0      | .0       | 3.3        | 3.8   | 2.1   | 2.9   |    |
| TOT OBS  |                    |      |       |       |    |     | 49320     |          | 13.1     | 10727      | 13239 | 11492 | 13862 |    |
| TOT PCT  | 23.3               | 47.4 | 22.6  | 6.0   | .7 |     |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

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AREA 0001 AZORES  
38.0N 26.7W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 3.3  | 5.5 | 38.2 | 38.4               | 11.7  | 2.5   | .2  | 13.0 | 100.0    | 10727     |
| 06009 | 3.8  | 6.1 | 40.0 | 38.3               | 11.5  | 2.1   | .2  | 12.6 | 100.0    | 13239     |
| 12015 | 2.1  | 5.5 | 37.1 | 39.8               | 12.7  | 2.5   | .3  | 13.5 | 100.0    | 11492     |
| 18021 | 2.9  | 5.5 | 37.6 | 38.1               | 13.1  | 2.6   | .2  | 13.1 | 100.0    | 13862     |
| TOT   |      |     |      |                    |       |       |     | 13.1 |          | 49320     |
| PCT   | 3.0  | 5.7 | 38.3 | 38.1               | 12.3  | 2.4   | .2  |      | 100.0    |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
| N        | 2.2  | 2.7  | 4.2  | 2.3           |              | 4.9                    |
| NE       | 2.1  | 2.4  | 4.2  | 2.4           |              | 5.1                    |
| E        | 1.9  | 2.0  | 3.6  | 2.5           |              | 5.2                    |
| SE       | 1.6  | 1.3  | 2.8  | 2.2           |              | 5.1                    |
| S        | 2.3  | 2.0  | 3.9  | 3.8           |              | 5.2                    |
| SW       | 3.1  | 2.8  | 5.2  | 4.5           |              | 5.1                    |
| W        | 3.9  | 3.7  | 5.7  | 3.8           |              | 4.8                    |
| NW       | 2.4  | 3.2  | 4.5  | 2.4           |              | 4.8                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | 1.1  | .5   | .5   | .4            |              | 4.0                    |
| TOT OBS  |      |      |      |               | 26852        | 5.0                    |
| TOT PCT  | 20.5 | 20.5 | 34.6 | 24.4          | 100.0        |                        |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600  | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|-----|-----|-----|------|------|------|------|------|------|-------|--------------------|--------------|
|         | 149 | 299 | 599 | 999  | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| N       | .1  | *   | .2  | 1.1  | 1.9  | 1.1  | .3   | .1   | *    | *     | 6.2                |              |
| NE      | *   | *   | .2  | 1.0  | 2.2  | 1.2  | .4   | .1   | *    | .1    | 6.0                |              |
| E       | *   | *   | .2  | 1.0  | 1.8  | 1.1  | .4   | .1   | *    | *     | 5.2                |              |
| SE      | *   | *   | .2  | .9   | 1.4  | .8   | .3   | .1   | *    | *     | 4.1                |              |
| S       | .1  | .1  | .4  | 1.3  | 2.1  | 1.1  | .4   | .1   | *    | .1    | 6.3                |              |
| SW      | .1  | .1  | .4  | 1.9  | 2.6  | 1.2  | .5   | .2   | .1   | .1    | 8.4                |              |
| W       | .1  | .1  | .4  | 1.8  | 2.7  | 1.2  | .5   | .1   | *    | .1    | 10.0               |              |
| NW      | *   | *   | .3  | 1.1  | 2.1  | 1.1  | .4   | .1   | *    | *     | 7.2                |              |
| VAR     | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| CALM    | *   | *   | *   | .2   | .2   | .1   | *    | *    | *    | *     | 1.8                |              |
| TOT OBS | .5  | .4  | 2.3 | 10.3 | 17.1 | 9.1  | 3.2  | 1.0  | .3   | .5    | 55.2               | 26852        |
| TOT PCT |     |     |     |      |      |      |      |      |      |       |                    | 100.0        |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .7          | .8         | .9         | .9         | .9           | .9           | .9            | .9         |
| = OR >5000        | 1.4         | 1.8        | 1.8        | 1.8        | 1.8          | 1.8          | 1.8           | 1.8        |
| = OR >3500        | 3.9         | 4.9        | 5.1        | 5.1        | 5.1          | 5.1          | 5.1           | 5.1        |
| = OR >2000        | 11.2        | 13.8       | 14.1       | 14.2       | 14.2         | 14.2         | 14.2          | 14.2       |
| = OR >1000        | 24.0        | 30.2       | 31.0       | 31.1       | 31.1         | 31.2         | 31.2          | 31.2       |
| = OR >500         | 30.7        | 39.8       | 41.2       | 41.4       | 41.4         | 41.4         | 41.4          | 41.4       |
| = OR >300         | 31.7        | 41.7       | 43.4       | 43.6       | 43.7         | 43.7         | 43.7          | 43.7       |
| = OR >150         | 31.8        | 42.0       | 43.8       | 44.0       | 44.1         | 44.1         | 44.1          | 44.2       |
| = OR >0           | 32.0        | 42.3       | 44.2       | 44.5       | 44.6         | 44.6         | 44.7          | 44.7       |

TOTAL NUMBER OF OBS: 27224

PCT FREQ NH <5/8: 55.3

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS CD | TOTAL<br>OBS |
|--|-----|------|------|------|------|-----|-----|-----|------|--------|--------------|
|  | 7.3 | 10.2 | 13.5 | 13.1 | 10.8 | 7.9 | 9.9 | 9.5 | 17.4 | .3     | 28957        |



PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

ANNUAL

AREA 0001 AZORES  
38.0N 26.7W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N     | NE   | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-------|------|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | *     | *    | *   | *   | *    | *    | *    | *    | .0  | .0   | .1    |              |
|              | NO PCP | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .1    |              |
|              | TOT %  | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .1    |              |
| 1/2<1        | PCP    | .0    | *    | *   | *   | *    | *    | *    | *    | .0  | .0   | .1    |              |
|              | NO PCP | *     | *    | *   | *   | .1   | .1   | .1   | *    | .0  | *    | .3    |              |
|              | TOT %  | *     | *    | *   | *   | .1   | .1   | .1   | *    | .0  | *    | .4    |              |
| 1<2          | PCP    | *     | *    | *   | *   | *    | .1   | *    | *    | .0  | *    | .2    |              |
|              | NO PCP | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .2    |              |
|              | TOT %  | *     | *    | *   | *   | .1   | .1   | .1   | *    | .0  | *    | .4    |              |
| 2<5          | PCP    | .1    | .1   | .1  | .1  | .2   | .3   | .1   | .1   | .0  | *    | 1.1   |              |
|              | NO PCP | .1    | .1   | .1  | .1  | .3   | .3   | .3   | .2   | .0  | *    | 1.5   |              |
|              | TOT %  | .2    | .1   | .2  | .3  | .5   | .6   | .5   | .3   | .0  | *    | 2.6   |              |
| 5<10         | PCP    | .3    | .2   | .3  | .3  | .5   | .8   | .6   | .4   | .0  | *    | 3.3   |              |
|              | NO PCP | 1.7   | 1.4  | 1.4 | 1.3 | 2.2  | 3.2  | 2.8  | 2.0  | .0  | .2   | 16.1  |              |
|              | TOT %  | 2.0   | 1.6  | 1.7 | 1.5 | 2.7  | 4.0  | 3.4  | 2.3  | .0  | .2   | 19.4  |              |
| 10+          | PCP    | .2    | .1   | .1  | .1  | .2   | .3   | .3   | .2   | .0  | *    | 1.6   |              |
|              | NO PCP | 8.9   | 8.9  | 7.8 | 5.8 | 8.5  | 10.9 | 12.7 | 9.9  | .0  | 2.1  | 75.5  |              |
|              | TOT %  | 9.1   | 9.1  | 8.0 | 6.0 | 8.7  | 11.2 | 12.9 | 10.1 | .0  | 2.1  | 77.1  |              |
| TOT OBS      |        | 32812 |      |     |     |      |      |      |      |     |      |       |              |
| TOT PCT      |        | 11.3  | 10.9 | 9.9 | 7.9 | 12.0 | 16.0 | 16.9 | 12.8 | .0  | 2.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N     | NE   | E   | SE  | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-------|------|-----|-----|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | *     | *    | *   | *   | *    | *    | .0   | *    | .0  | *    | *     |              |
|              | 4-10       | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .1    |              |
|              | 11-21      | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | *     |              |
|              | 22+        | *     | .0   | .0  | *   | *    | *    | *    | *    | .0  | *    | *     |              |
|              | TOT %      | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | *     | .0   | .0  | .0  | .0   | *    | *    | *    | .0  | *    | *     |              |
|              | 4-10       | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .1    |              |
|              | 11-21      | *     | *    | *   | *   | .1   | *    | *    | *    | .0  | *    | .2    |              |
|              | 22+        | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .1    |              |
|              | TOT %      | *     | *    | *   | *   | .1   | .1   | .1   | *    | .0  | *    | .4    |              |
| 1<2          | 0-3        | *     | .0   | *   | .0  | *    | *    | *    | *    | .0  | *    | *     |              |
|              | 4-10       | *     | *    | *   | *   | *    | *    | *    | *    | .0  | *    | .1    |              |
|              | 11-21      | *     | *    | *   | *   | *    | .1   | .1   | *    | .0  | *    | .2    |              |
|              | 22+        | *     | *    | *   | *   | .1   | .1   | *    | *    | .0  | *    | .2    |              |
|              | TOT %      | *     | *    | *   | *   | .1   | .1   | .1   | *    | .0  | *    | .6    |              |
| 2<5          | 0-3        | *     | *    | *   | *   | *    | *    | *    | *    | .0  | .1   | .1    |              |
|              | 4-10       | .1    | .1   | .1  | .1  | .1   | .1   | .1   | .1   | .0  | *    | .6    |              |
|              | 11-21      | .1    | .1   | .1  | .1  | .2   | .3   | .2   | .1   | .0  | *    | 1.1   |              |
|              | 22+        | .1    | *    | .1  | .1  | .2   | .3   | .2   | .1   | .0  | *    | 1.1   |              |
|              | TOT %      | .2    | .2   | .2  | .3  | .5   | .7   | .5   | .3   | .0  | .1   | 3.0   |              |
| 5<10         | 0-3        | .1    | .1   | .1  | .1  | .1   | .1   | .1   | .1   | .0  | .3   | 1.0   |              |
|              | 4-10       | .7    | .0   | .6  | .4  | .6   | .9   | .8   | .8   | .0  | *    | 5.5   |              |
|              | 11-21      | .8    | .7   | .7  | .7  | 1.2  | 1.7  | 1.4  | .9   | .0  | *    | 8.0   |              |
|              | 22+        | .4    | .3   | .3  | .4  | .8   | 1.2  | 1.0  | .7   | .0  | *    | 5.1   |              |
|              | TOT %      | 2.0   | 1.7  | 1.7 | 1.6 | 2.6  | 4.0  | 3.4  | 2.5  | .0  | .3   | 19.6  |              |
| 10+          | 0-3        | .6    | .5   | .6  | .4  | .5   | .6   | .7   | .5   | .0  | 2.4  | 6.8   |              |
|              | 4-10       | 3.9   | 4.2  | 3.7 | 3.0 | 3.4  | 4.1  | 4.7  | 4.0  | .0  | *    | 31.1  |              |
|              | 11-21      | 3.6   | 3.6  | 2.9 | 2.2 | 3.6  | 4.8  | 5.1  | 4.1  | .0  | *    | 30.0  |              |
|              | 22+        | .9    | .7   | .5  | .4  | .9   | 1.5  | 2.0  | 1.5  | .0  | *    | 8.4   |              |
|              | TOT %      | 9.1   | 9.0  | 7.7 | 6.0 | 8.4  | 10.9 | 12.5 | 10.2 | .0  | 2.4  | 76.3  |              |
| TOT OBS      |            | 40091 |      |     |     |      |      |      |      |     |      |       |              |
| TOT PCT      |            | 11.4  | 11.0 | 9.6 | 8.0 | 11.8 | 15.8 | 16.6 | 13.1 | .0  | 2.8  | 100.0 |              |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

ANNUAL

AREA 0001 AZORES  
38.0N 26.7W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS   |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|----------------|
| 00003         | .6         | .4         | 1.7        | 8.9        | 16.0         | 7.7          | 2.7          | .8           | .3           | .7    | 39.8  | 60.2                | 6659           |
| 06009         | .6         | .6         | 2.4        | 11.4       | 17.4         | 9.3          | 2.9          | 1.1          | .2           | .6    | 46.4  | 53.6                | 6405           |
| 12015         | .6         | .4         | 2.3        | 10.1       | 16.9         | 9.4          | 3.5          | .9           | .3           | .5    | 45.0  | 55.0                | 7608           |
| 18021         | .3         | .3         | 2.5        | 9.4        | 15.9         | 9.2          | 3.3          | .9           | .3           | .5    | 42.6  | 57.4                | 7437           |
| TOT<br>PCT    | .5         | .4         | 2.2        | 10.0       | 16.5         | 8.9          | 3.2          | .9           | .3           | .5    | 43.5  | 56.5                | 28109<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS   |
|---------------|------|-------|-----|-----|------|------|----------------|
| 00003         | .1   | .2    | .4  | 2.6 | 18.9 | 77.7 | 9351           |
| 06009         | .2   | .4    | .6  | 3.1 | 21.4 | 74.2 | 10356          |
| 12015         | .2   | .4    | .6  | 2.8 | 17.4 | 78.5 | 10029          |
| 18021         | .1   | .5    | .6  | 3.5 | 20.4 | 74.9 | 10994          |
| TOT<br>PCT    | .2   | .4    | .5  | 3.0 | 19.6 | 76.3 | 40730<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><5000 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS   |
|---------------|---------------|------------|-------------|-----------------|--------------------|----------------|
| 00003         | .7            | 2.9        | 13.3        | 28.6            | 58.1               | 6358           |
| 06009         | .6            | 3.8        | 16.8        | 31.3            | 51.9               | 6181           |
| 12015         | .6            | 3.4        | 15.2        | 31.0            | 53.8               | 7436           |
| 18021         | .3            | 3.3        | 14.2        | 29.8            | 56.0               | 7249           |
| TOT<br>PCT    | .5            | 3.3        | 14.9        | 30.2            | 54.9               | 27224<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89        | .0   | .0    | *     | .0    | *     | *     | .0    | .0     | *            | *           |
| 80/84        | .0   | *     | *     | .1    | .2    | .2    | .1    | *      | .6           | *           |
| 75/79        | .0   | *     | *     | .2    | .8    | 1.7   | 1.5   | .6     | 4.8          | *           |
| 70/74        | .0   | *     | *     | .4    | 2.6   | 5.3   | 6.7   | 4.7    | 19.8         | *           |
| 65/69        | .0   | *     | .1    | .7    | 2.7   | 5.9   | 8.1   | 6.2    | 23.7         | *           |
| 60/64        | .0   | *     | .1    | 1.1   | 5.0   | 8.7   | 11.7  | 8.3    | 35.0         | *           |
| 55/59        | .0   | .0    | *     | .7    | 2.8   | 4.5   | 4.3   | 2.3    | 14.7         | *           |
| 50/54        | .0   | .0    | *     | .1    | .2    | .3    | .4    | .2     | 1.4          | *           |
| 45/49        | .0   | .0    | .0    | .0    | .0    | *     | *     | *      | *            | *           |
| TOTAL<br>PCT | .0   | *     | .3    | 3.4   | 14.4  | 26.7  | 32.9  | 22.4   | 27833        | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S    | SW   | W    | NW   | VAR | CALM |
|------|------|-----|-----|------|------|------|------|-----|------|
| .1   | *    | *   | .0  | *    | *    | *    | .0   | .0  | .0   |
| .1   | .1   | .1  | *   | *    | .1   | .1   | .1   | .0  | *    |
| .4   | .5   | .5  | .3  | .6   | 1.0  | .9   | .5   | .0  | .2   |
| 2.2  | 2.4  | 2.1 | 1.5 | 2.1  | 3.3  | 3.4  | 2.2  | .0  | .8   |
| 2.9  | 2.8  | 2.3 | 1.7 | 3.1  | 3.6  | 3.6  | 2.9  | .0  | .6   |
| 3.3  | 3.3  | 3.4 | 3.4 | 5.1  | 6.6  | 5.7  | 3.7  | .0  | .5   |
| 2.1  | 1.8  | 1.4 | .9  | 1.1  | 1.5  | 2.8  | 3.0  | .0  | .2   |
| .3   | .1   | .1  | *   | *    | .1   | .4   | .4   | .0  | *    |
| *    | *    | .0  | .0  | .0   | *    | *    | *    | .0  | .0   |
| 11.1 | 11.0 | 9.8 | 7.8 | 12.0 | 16.2 | 16.9 | 12.8 | .0  | 2.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 82  | 70  | 69  | 64  | 60 | 57 | 48  | 63.9 | 10740        |
| 06009         | 87  | 70  | 68  | 64  | 59 | 57 | 45  | 63.7 | 13217        |
| 12015         | 88  | 75  | 72  | 66  | 61 | 58 | 49  | 66.0 | 11307        |
| 18021         | 89  | 74  | 71  | 66  | 61 | 58 | 48  | 65.5 | 13620        |
| TOT           | 89  | 73  | 70  | 65  | 60 | 57 | 45  | 64.8 | 48904        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.3   | 11.4  | 25.1  | 35.2  | 26.0   | 82   | 6839         |
| 06009         | .0   | 2.3   | 10.9  | 24.7  | 34.9  | 27.3   | 82   | 6883         |
| 12015         | .0   | 5.7   | 17.4  | 28.1  | 30.4  | 18.5   | 78   | 7291         |
| 18021         | .0   | 4.6   | 17.8  | 28.6  | 31.3  | 17.8   | 79   | 7327         |
| TOT           | 0    | 106.7 | 4090  | 7531  | 9325  | 6327   | 80   | 28340        |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

ANNUAL

AREA 0001 AZORES  
38.0N 26.7W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0       | 1     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *        | 12    | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | *        | .1       | .1       | .1       | *        | 75    | *        | .3        |
| 9/10               | .0       | .0       | .0       | *        | *        | *        | .2       | .1       | .1       | .1       | *        | 177   | .0       | .6        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .2       | .3       | .3       | .3       | .1       | .0       | 364   | *        | 1.2       |
| 6                  | .0       | .0       | .0       | *        | .1       | .3       | .2       | .2       | .2       | *        | .0       | 320   | *        | 1.1       |
| 5                  | .0       | .0       | *        | *        | .3       | .6       | .4       | .4       | .3       | *        | .0       | 587   | *        | 2.0       |
| 4                  | .0       | .0       | *        | .1       | .9       | .8       | .6       | .7       | .3       | *        | .0       | 1040  | *        | 3.5       |
| 3                  | .0       | .0       | *        | .2       | 1.6      | 1.3      | .7       | .9       | .2       | *        | .0       | 1491  | *        | 4.9       |
| 2                  | .0       | .0       | *        | .6       | 3.2      | 2.0      | 1.4      | 1.3      | .2       | *        | .0       | 2642  | .1       | 8.7       |
| 1                  | .0       | *        | *        | 1.2      | 4.1      | 2.3      | 1.8      | 1.7      | .1       | .0       | .0       | 3376  | .2       | 11.1      |
| 0                  | .0       | .0       | .1       | 2.9      | 5.1      | 2.8      | 3.0      | 1.6      | .1       | *        | .0       | 4666  | .2       | 15.4      |
| -1                 | .0       | .0       | .2       | 3.2      | 4.0      | 2.4      | 2.8      | 1.0      | *        | .0       | .0       | 4083  | .2       | 13.5      |
| -2                 | .0       | *        | .3       | 3.4      | 3.1      | 2.4      | 2.2      | .7       | .0       | .0       | .0       | 3593  | .1       | 12.0      |
| -3                 | .0       | *        | .6       | 2.6      | 1.9      | 1.6      | 1.6      | .2       | *        | .0       | .0       | 2544  | *        | 8.5       |
| -4                 | .0       | *        | .7       | 1.9      | 1.5      | 1.3      | .9       | .1       | *        | .0       | .0       | 1936  | *        | 6.4       |
| -5                 | .0       | *        | .7       | 1.2      | 1.0      | .8       | .5       | .1       | .0       | .0       | .0       | 1276  | *        | 4.2       |
| -6                 | *        | .1       | .5       | .7       | .5       | .4       | .2       | *        | .0       | .0       | .0       | 720   | *        | 2.4       |
| -7/-8              | *        | .2       | .5       | .6       | .5       | .2       | .2       | *        | .0       | .0       | .0       | 664   | *        | 2.2       |
| -9/-10             | *        | .1       | .2       | .2       | .2       | .1       | *        | .0       | .0       | .0       | .0       | 228   | .0       | .7        |
| -11/-13            | *        | .1       | .1       | .1       | *        | *        | .0       | .0       | .0       | .0       | .0       | 94    | .0       | .3        |
| -14/-16            | .0       | *        | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 10    | .0       | *         |
| TOTAL              |          |          |          |          |          |          |          |          |          |          |          | 29899 |          |           |
| PCT                | *        | .4       | 3.9      | 19.0     | 28.1     | 19.6     | 17.2     | 9.4      | 1.9      | .4       | *        | 100.0 | 1.1      | 98.9      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .5   | *     | .0    | .0    | .0  | .9   | .3  | .9   | *     | .0    | .0    | .0  | 1.3  |
| 1-2     | .1  | 2.2  | .9    | .0    | .0    | .0  | 3.2  | .1  | 2.8  | .9    | .0    | .0    | .0  | 3.7  |
| 3-4     | *   | 1.1  | 1.6   | .1    | .0    | .0  | 2.8  | *   | 1.3  | 1.7   | .2    | .0    | .0  | 3.2  |
| 5-6     | .0  | .3   | 1.2   | .3    | *     | .0  | 1.9  | .0  | .3   | 1.2   | .2    | .0    | .0  | 1.7  |
| 7       | .0  | *    | .6    | .3    | .0    | .0  | 1.0  | .0  | *    | .5    | .3    | *     | .0  | .8   |
| 8-9     | *   | *    | .2    | .2    | *     | .0  | .8   | .0  | .0   | .1    | .2    | *     | .0  | .3   |
| 10-11   | .0  | *    | .1    | .1    | *     | .0  | .2   | .0  | .0   | .1    | .2    | *     | .0  | .2   |
| 12      | .0  | *    | .0    | *     | *     | .0  | .2   | .0  | .0   | *     | .1    | *     | .0  | .1   |
| 13-16   | .0  | .0   | *     | .1    | .1    | .0  | .2   | .0  | .0   | .0    | .1    | .1    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | *     | .0  | *    | .0  | .0   | *     | *     | *     | .0  | *    |
| 20-22   | .0  | .0   | .0    | *     | *     | *   | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 4.2  | 4.7   | 1.2   | .2    | *   | 10.7 | .4  | 5.3  | 4.4   | 1.1   | .1    | .0  | 11.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .7   | *     | .0    | .0    | .0  | 1.1 | .2  | .6   | *     | .0    | .0    | .0  | .8  |
| 1-2     | .1  | 2.4  | .8    | .0    | .0    | .0  | 3.3 | .1  | 1.6  | .5    | .0    | .0    | .0  | 2.1 |
| 3-4     | *   | 1.1  | 1.7   | .1    | .0    | .0  | 2.9 | *   | .7   | 1.4   | .1    | .0    | .0  | 2.1 |
| 5-6     | *   | .1   | .9    | .2    | *     | .0  | 1.3 | .0  | .1   | .9    | .2    | *     | .0  | 1.3 |
| 7       | .0  | *    | .4    | .2    | *     | .0  | .7  | .0  | .1   | .3    | .2    | *     | .0  | .7  |
| 8-9     | .0  | *    | .1    | .2    | *     | .0  | .3  | .0  | .1   | .3    | .2    | *     | .0  | .2  |
| 10-11   | .0  | .0   | *     | .1    | *     | .0  | .1  | .0  | .0   | *     | .1    | *     | .0  | .1  |
| 12      | .0  | .0   | *     | *     | *     | .0  | .1  | .0  | *    | .0    | *     | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | *     | *     | .0  | .1  | .0  | .0   | *     | *     | *     | .0  | .1  |
| 17-19   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 4.3  | 3.9   | .9    | .2    | .0  | 9.8 | .3  | 3.1  | 3.2   | .9    | .1    | *   | 7.5 |



PERIOD: (OVER-ALL) 1963-1973

ANNUAL

TABLE 18 (CONT)

AREA 0001 AZORES  
38.0N 26.7W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | .5   | .1    | .0    | .0    | .0  | .7   | .2  | .6   | .1    | .0    | .0    | .0  | .9   |
| 1-2     | .1  | 1.8  | 1.0   | .0    | .0    | .0  | 2.9  | .2  | 2.5  | 1.1   | .0    | .0    | .0  | 3.7  |
| 3-4     | *   | 1.1  | 1.9   | .3    | .0    | .0  | 3.3  | *   | 1.3  | 2.9   | .3    | .0    | .0  | 4.6  |
| 5-6     | .0  | .3   | 1.5   | .4    | *     | .0  | 2.3  | .0  | .3   | 2.3   | .8    | *     | .0  | 3.3  |
| 7       | .0  | *    | .6    | .6    | .1    | *   | 1.3  | *   | *    | 1.0   | .7    | .1    | *   | 1.8  |
| 8-9     | .0  | *    | .3    | .3    | *     | .0  | .6   | .0  | *    | .4    | .5    | .1    | *   | 1.1  |
| 10-11   | .0  | .0   | *     | .1    | *     | .0  | .2   | .0  | *    | .1    | .5    | .1    | .0  | .7   |
| 12      | .0  | *    | *     | .1    | *     | .0  | .1   | .0  | .0   | *     | .1    | .1    | .0  | .2   |
| 13-16   | .0  | .0   | *     | .1    | *     | *   | .2   | .0  | .0   | *     | .2    | .1    | *   | .3   |
| 17-19   | .0  | .0   | .0    | *     | *     | .0  | *    | .0  | .0   | .0    | *     | *     | *   | .1   |
| 20-22   | .0  | .0   | .0    | *     | *     | .0  | *    | .0  | .0   | .0    | *     | *     | *   | *    |
| 23-25   | .0  | .0   | .0    | *     | *     | .0  | *    | .0  | .0   | .0    | *     | *     | *   | *    |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | *     | .0  | *    |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 3.7  | 5.3   | 1.9   | .2    | *   | 11.6 | .4  | 4.7  | 7.9   | 3.2   | .6    | *   | 16.8 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .3  | .8   | *     | .0    | .0    | .0  | 1.1  | .3  | .5   | *     | .0    | .0    | .0  | .9   |           |
| 1-2     | .1  | 2.7  | 1.1   | .0    | .0    | .0  | 3.9  | .1  | 2.3  | .8    | .0    | .0    | .0  | 3.2  |           |
| 3-4     | .1  | 1.6  | 2.6   | .2    | .0    | .0  | 4.5  | *   | 1.3  | 1.7   | .3    | .0    | .0  | 3.4  |           |
| 5-6     | *   | .3   | 2.1   | .7    | *     | .0  | 3.1  | *   | .2   | 1.5   | .4    | *     | .0  | 2.2  |           |
| 7       | .0  | .1   | .9    | .9    | .1    | .0  | 2.0  | *   | .1   | .7    | .4    | *     | *   | 1.3  |           |
| 8-9     | .0  | *    | .4    | .5    | .1    | *   | 1.0  | .0  | *    | .2    | .3    | .1    | *   | .6   |           |
| 10-11   | .0  | .0   | .2    | .4    | .1    | *   | .7   | .0  | *    | .1    | .3    | *     | .0  | .4   |           |
| 12      | .0  | *    | .1    | .2    | .1    | .0  | .3   | .0  | *    | *     | .1    | *     | .0  | .2   |           |
| 13-16   | .0  | .0   | *     | .2    | .1    | *   | .4   | .0  | .0   | *     | .1    | .1    | .0  | .2   |           |
| 17-19   | .0  | .0   | *     | *     | *     | .0  | .1   | .0  | .0   | .0    | *     | *     | *   | .1   |           |
| 20-22   | .0  | .0   | .0    | *     | .1    | *   | .1   | .0  | .0   | .0    | *     | *     | *   | *    |           |
| 23-25   | .0  | .0   | .0    | .0    | *     | .0  | .0   | .0  | .0   | .0    | *     | *     | .0  | *    |           |
| 26-32   | .0  | .0   | .0    | *     | *     | *   | .1   | .0  | .0   | .0    | .0    | *     | .0  | *    |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .5  | 5.5  | 7.4   | 3.1   | .8    | .1  | 17.3 | .5  | 4.4  | 5.2   | 2.0   | .4    | *   | 12.5 | 97.7      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT DBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 5.1 | 5.2  | .4    | .0    | .0    | .0  | 10.6  |         |
| 1-2     | 1.1 | 18.1 | 6.9   | .0    | .0    | .0  | 26.0  |         |
| 3-4     | .2  | 9.4  | 15.3  | 1.6   | .0    | .0  | 26.6  |         |
| 5-6     | *   | 2.0  | 11.4  | 3.2   | .1    | .0  | 16.8  |         |
| 7       | *   | .3   | 5.1   | 3.6   | .3    | *   | 9.4   |         |
| 8-9     | *   | .1   | 1.7   | 2.4   | .4    | *   | 4.6   |         |
| 10-11   | .0  | *    | .5    | 1.7   | .4    | *   | 2.6   |         |
| 12      | .0  | *    | .1    | .7    | .3    | .0  | 1.1   |         |
| 13-16   | .0  | .0   | .1    | .8    | .5    | *   | 1.5   |         |
| 17-19   | .0  | .0   | *     | .1    | .2    | *   | .3    |         |
| 20-22   | .0  | .0   | .0    | *     | .1    | *   | .2    |         |
| 23-25   | .0  | .0   | .0    | *     | .1    | *   | .1    |         |
| 26-32   | .0  | .0   | .0    | *     | .1    | *   | .1    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 6.5 | 35.2 | 41.6  | 14.1  | 2.5   | .2  | 100.0 | 11947   |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.5 | 9.7  | 12.2 | 5.8  | 1.9  | .8  | .3    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 7706  | 3        |
| 6-7          | .1  | 1.2  | 5.6  | 8.2  | 4.7  | 2.3 | 1.2   | .6  | .5    | .1    | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0  | 5742  | 6        |
| 8-9          | *   | .5   | 1.5  | 3.2  | 3.7  | 2.6 | 1.6   | .7  | .9    | .1    | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 3566  | 8        |
| 10-11        | .0  | .4   | .5   | 1.1  | 1.2  | 1.5 | 1.1   | .7  | .8    | .2    | .1    | .1    | .1    | *     | .0    | .0    | .0    | .0    | .0  | 1819  | 9        |
| 12-13        | .0  | .0   | .4   | .4   | .4   | .4  | .5    | .4  | .4    | .1    | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 774   | 10       |
| >13          | .0  | .0   | .0   | .2   | .2   | .2  | .2    | .2  | .3    | *     | .1    | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 360   | 12       |
| INDET        | 3.3 | 2.1  | 2.5  | 2.0  | 1.6  | .9  | .7    | .3  | .5    | .1    | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0  | 3267  | 5        |
| TOTAL        |     |      |      |      |      |     |       |     |       |       |       |       |       |       |       |       |       |       |     | 23234 | 6        |
| PCT          | 6.0 | 13.8 | 22.7 | 20.8 | 13.6 | 8.8 | 5.7   | 3.0 | 3.6   | .7    | .6    | .3    | .3    | *     | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1926-1973  
(OVER-ALL) 1855-1973

TABLE 20

AREA 0001 AZORES  
38.0N 26.7W

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

| SEA TMP<br>DEG F | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANN   | PCT   |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| 96+              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 95/96            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 93/94            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 91/92            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 89/90            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 87/88            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 85/86            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 83/84            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 81/82            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 6     | *     |
| 79/80            | .0   | .0   | .0   | .0   | .0   | .1   | .3   | 1.0  | .5   | .1   | .0   | .0   | 64    | .1    |
| 77/78            | .0   | .0   | .0   | .0   | .0   | .1   | 1.5  | 4.6  | 3.1  | .4   | .1   | .0   | 328   | .7    |
| 75/76            | .0   | .0   | .0   | .0   | .0   | .3   | 4.7  | 17.1 | 10.3 | 1.4  | .2   | *    | 1150  | 2.5   |
| 73/74            | *    | .0   | .0   | .1   | .1   | 1.7  | 14.1 | 34.3 | 34.5 | 7.5  | .3   | .0   | 3295  | 7.2   |
| 71/72            | .0   | .0   | .1   | *    | .3   | 4.1  | 28.7 | 28.5 | 32.2 | 19.5 | 2.3  | .3   | 4028  | 8.8   |
| 69/70            | .1   | *    | .2   | .3   | .9   | 14.4 | 29.8 | 41.1 | 14.8 | 31.8 | 8.7  | .9   | 3961  | 8.7   |
| 67/68            | .8   | .4   | .5   | .8   | 3.9  | 25.4 | 15.8 | 7.0  | 3.7  | 25.1 | 25.4 | 4.5  | 4050  | 8.9   |
| 65/66            | 4.4  | 1.6  | 1.4  | 3.4  | 13.6 | 27.9 | 4.1  | .2   | .6   | 11.2 | 32.7 | 15.7 | 4488  | 9.8   |
| 63/64            | 23.0 | 9.7  | 8.4  | 16.9 | 41.1 | 19.0 | .8   | .2   | .2   | 2.5  | 23.5 | 40.7 | 7279  | 15.9  |
| 61/62            | 40.0 | 32.2 | 25.2 | 34.4 | 27.7 | 5.8  | .1   | .0   | .1   | .4   | 5.4  | 28.0 | 7976  | 17.5  |
| 59/60            | 24.9 | 39.9 | 42.0 | 32.2 | 10.7 | 1.0  | *    | .0   | .0   | .1   | 1.2  | 8.4  | 6527  | 14.3  |
| 57/58            | 5.1  | 13.2 | 18.7 | 10.2 | 1.5  | .2   | .0   | .0   | .0   | .0   | .2   | 1.2  | 2064  | 4.5   |
| 55/56            | 1.1  | 2.2  | 2.7  | 1.8  | .1   | *    | .0   | .0   | .0   | *    | .1   | .1   | 335   | .7    |
| 53/54            | .5   | .4   | .5   | .1   | .0   | .0   | .0   | .0   | .0   | .0   | *    | .1   | 66    | .1    |
| 51/52            | *    | .4   | .2   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 26    | .1    |
| 49/50            | .0   | *    | .1   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 4     | *     |
| 47/48            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 45/46            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 43/44            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 41/42            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 39/40            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 37/38            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 35/36            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 33/34            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 31/32            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 29/30            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 27/28            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| <27              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| TOTAL            | 4178 | 4024 | 4287 | 3936 | 3707 | 3484 | 3357 | 3230 | 3533 | 3812 | 4172 | 3927 | 45647 | 100.0 |
| MEAN             | 61.3 | 60.2 | 59.9 | 60.9 | 62.9 | 66.4 | 70.6 | 73.0 | 72.3 | 69.2 | 65.8 | 63.1 | 65.4  |       |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000 | 0300 | 0600 | 0900 | 1200 | 1500 | 1800 | 2100 | MEAN | TOTAL<br>OBS |
|-----|------|------|------|------|------|------|------|------|------|--------------|
| JAN | 1019 | 1020 | 1018 | 1018 | 1019 | 1019 | 1018 | 1019 | 1018 | 3475         |
| FEB | 1016 | 1017 | 1016 | 1019 | 1017 | 1018 | 1016 | 1018 | 1017 | 3338         |
| MAR | 1018 | 1017 | 1017 | 1017 | 1018 | 1019 | 1017 | 1019 | 1017 | 3474         |
| APR | 1022 | 1020 | 1020 | 1019 | 1021 | 1019 | 1020 | 1020 | 1020 | 3318         |
| MAY | 1022 | 1021 | 1021 | 1022 | 1022 | 1021 | 1021 | 1021 | 1022 | 3195         |
| JUN | 1024 | 1023 | 1023 | 1022 | 1024 | 1022 | 1023 | 1023 | 1023 | 3083         |
| JUL | 1026 | 1025 | 1025 | 1026 | 1026 | 1025 | 1025 | 1025 | 1025 | 2794         |
| AUG | 1023 | 1024 | 1022 | 1023 | 1023 | 1024 | 1023 | 1024 | 1023 | 2824         |
| SEP | 1022 | 1021 | 1021 | 1021 | 1022 | 1021 | 1021 | 1021 | 1021 | 3056         |
| OCT | 1019 | 1020 | 1019 | 1019 | 1020 | 1018 | 1019 | 1019 | 1019 | 3242         |
| NOV | 1020 | 1021 | 1019 | 1022 | 1020 | 1021 | 1019 | 1022 | 1020 | 3334         |
| DEC | 1022 | 1023 | 1021 | 1023 | 1022 | 1022 | 1021 | 1023 | 1022 | 3347         |
| ANN | 1021 | 1021 | 1020 | 1021 | 1021 | 1021 | 1020 | 1021 | 1021 | 38480        |
| OBS | 7646 | 1337 | 8180 | 1472 | 8048 | 1536 | 8752 | 1509 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 984  | 991  | 998  | 1011 | 1019 | 1027 | 1034 | 1039 | 1044 |
| FEB | 983  | 991  | 998  | 1009 | 1018 | 1025 | 1033 | 1038 | 1044 |
| MAR | 984  | 989  | 997  | 1011 | 1019 | 1025 | 1032 | 1035 | 1040 |
| APR | 991  | 998  | 1003 | 1015 | 1021 | 1027 | 1033 | 1036 | 1039 |
| MAY | 993  | 1001 | 1009 | 1017 | 1022 | 1027 | 1032 | 1035 | 1040 |
| JUN | 1000 | 1006 | 1011 | 1020 | 1024 | 1028 | 1031 | 1034 | 1038 |
| JUL | 1002 | 1011 | 1018 | 1023 | 1026 | 1029 | 1032 | 1034 | 1037 |
| AUG | 1002 | 1010 | 1015 | 1020 | 1023 | 1026 | 1030 | 1032 | 1036 |
| SEP | 996  | 1004 | 1011 | 1018 | 1022 | 1025 | 1029 | 1031 | 1036 |
| OCT | 993  | 1000 | 1006 | 1015 | 1020 | 1024 | 1030 | 1033 | 1037 |
| NOV | 989  | 996  | 1003 | 1015 | 1021 | 1026 | 1032 | 1035 | 1042 |
| DEC | 987  | 997  | 1004 | 1016 | 1023 | 1028 | 1035 | 1038 | 1043 |

PERIOD: (PRIMARY) 1908-1971  
(OVER-ALL) 1855-1971

JANUARY

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |           |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------|------------|--|
| WNO DIR            | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | BLWG DUST | NO SIG WEA |  |
| N                  | .8   | 4.1       | .0   | .0        | .0   | .0              | .0   | 4.9             | .0             | .0                      | 2.6         | .0                  | 1.0        | .0        | 91.5       |  |
| NE                 | .2   | 7.8       | 1.2  | .0        | .0   | .0              | .0   | 9.1             | 3.1            | .0                      | .0          | .0                  | .0         | .0        | 87.7       |  |
| E                  | 2.5  | 5.9       | 2.5  | .0        | .0   | .0              | .0   | 10.9            | 2.0            | .0                      | 1.0         | .0                  | .0         | .0        | 86.1       |  |
| SE                 | 2.7  | 1.8       | .0   | .0        | .0   | .0              | .0   | 4.4             | 1.8            | .0                      | .0          | .0                  | .0         | .0        | 93.8       |  |
| S                  | 6.4  | 3.4       | .0   | .0        | .0   | .0              | .0   | 9.8             | 3.0            | 3.4                     | .0          | .0                  | 1.3        | .0        | 84.3       |  |
| SW                 | 4.5  | .0        | .4   | .0        | .0   | .0              | .0   | 5.0             | 2.5            | .0                      | .0          | .0                  | .4         | .0        | 92.1       |  |
| W                  | 2.1  | 3.2       | 1.9  | .0        | .0   | .0              | .0   | 7.2             | 6.1            | .0                      | .0          | .0                  | 1.1        | .0        | 85.6       |  |
| NW                 | 2.4  | 8.1       | .0   | .0        | .0   | .0              | .0   | 10.5            | 4.8            | 3.2                     | .8          | .0                  | .0         | .0        | 82.3       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0        | .0         |  |
| CALM               | .0   | 8.3       | .0   | .0        | .0   | .0              | .0   | 8.3             | 16.7           | .0                      | 8.3         | .0                  | .0         | .0        | 66.7       |  |
| TOT PCT            | 2.2  | 4.8       | .9   | .0        | .0   | .0              | .0   | 7.9             | 3.1            | .6                      | .7          | .0                  | .4         | .0        | 87.4       |  |
| TOT OBS:           | 669  |           |      |           |      |                 |      |                 |                |                         |             |                     |            |           |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                        |                  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|------------------------|------------------|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003               | 2.9                | 4.3          | .7   | .0           | .0   | .0                    | .0   | 7.9                     | 4.3               | .0           | .7                | .0                        | .7            | .0                     | 86.3             |
| 06009               | 4.7                | 3.7          | 1.1  | .0           | .0   | .0                    | .0   | 9.5                     | 2.6               | 2.1          | 2.1               | .0                        | 1.1           | .0                     | 83.7             |
| 12015               | .6                 | 5.3          | 1.2  | .0           | .0   | .0                    | .0   | 7.1                     | 4.1               | .0           | .6                | .0                        | .0            | .0                     | 88.2             |
| 18021               | 1.1                | 5.3          | .5   | .0           | .0   | .0                    | .0   | 6.9                     | 1.6               | .0           | .0                | .0                        | .0            | .0                     | 91.5             |
| TOT PCT<br>TOT OBS: | 2.3<br>687         | 4.7          | .9   | .0           | .0   | .0                    | .0   | 7.9                     | 3.1               | .6           | .9                | .0                        | .4            | .0                     | 87.5             |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |           |          |          |       | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|-----------|----------|----------|-------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | TOTAL OBS | PCT FREQ | MEAN SPD |       | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | .8                 | 5.5  | 5.0   | 1.4   | .1    | *   | 12.9      | 12.5     |          | 12.3  | .0         | 12.7  | 12.8  | 13.3  | .0    | 13.4  | 13.5  |    |
| NE       | .7                 | 7.9  | 9.0   | 1.9   | .2    | .0  | 19.7      | 12.7     |          | 20.9  | 37.5       | 16.7  | 16.3  | 21.1  | 40.0  | 17.6  | 25.3  |    |
| E        | .8                 | 8.5  | 6.0   | 1.1   | .1    | .0  | 16.5      | 11.0     |          | 16.1  | 12.5       | 18.1  | 19.1  | 14.0  | .0    | 18.7  | 13.5  |    |
| SE       | .5                 | 5.9  | 3.5   | 1.3   | .0    | .0  | 11.2      | 11.5     |          | 11.2  | 15.6       | 12.2  | 13.3  | 10.4  | 20.0  | 10.6  | 9.7   |    |
| S        | .5                 | 4.3  | 3.5   | .5    | .0    | .0  | 8.8       | 11.2     |          | 9.3   | 9.4        | 7.1   | 8.8   | 9.7   | .0    | 9.2   | 9.2   |    |
| SW       | .7                 | 2.6  | 3.0   | 1.3   | .1    | .0  | 7.8       | 13.5     |          | 7.5   | .0         | 7.9   | 6.8   | 8.3   | 25.0  | 7.6   | 7.9   |    |
| W        | 1.2                | 3.8  | 5.2   | .9    | .2    | .0  | 11.2      | 12.1     |          | 11.4  | 12.5       | 13.4  | 10.3  | 12.8  | 15.0  | 10.8  | 6.7   |    |
| NW       | .7                 | 3.5  | 4.2   | 1.0   | .1    | .1  | 9.6       | 13.3     |          | 8.9   | .0         | 8.8   | 9.5   | 8.7   | .0    | 10.3  | 12.3  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0        | .0       |          | .0    | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 2.3                |      |       |       |       |     | 2.3       | .0       |          | 2.5   | 12.5       | 3.1   | 3.2   | 1.7   | .0    | 1.7   | 2.0   |    |
| TOT OBS  | 152                | 770  | 723   | 172   | 13    | 2   | 1832      | 11.9     |          | 316   | 8          | 353   | 190   | 349   | 5     | 363   | 248   |    |
| TOT PCT  | 8.3                | 42.0 | 39.5  | 9.4   | .7    | .1  | 100.0     |          |          | 100.0 | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |
|----------|--------------------|------|-------|-------|----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |       |           |          |          | 00         | 06    | 12    | 18    | 21    |
| N        | 2.9                | 6.4  | 3.3   | .2    | .1 |       |           |          |          | 12.9       | 12.5  | 12.0  | 13.1  | 13.5  |
| NE       | 3.7                | 10.1 | 5.5   | .4    | .1 |       |           |          |          | 19.7       | 12.7  | 21.3  | 16.0  | 21.4  |
| E        | 4.4                | 9.1  | 2.8   | .1    | .1 |       |           |          |          | 16.5       | 11.0  | 16.0  | 18.4  | 13.8  |
| SE       | 3.1                | 5.6  | 2.0   | .4    | .0 |       |           |          |          | 11.2       | 11.5  | 11.3  | 12.6  | 10.5  |
| S        | 2.2                | 4.7  | 2.0   | .0    | .0 |       |           |          |          | 8.8        | 11.2  | 9.3   | 7.7   | 9.5   |
| SW       | 2.0                | 3.0  | 2.1   | .6    | *  |       |           |          |          | 7.8        | 13.5  | 7.3   | 7.6   | 8.5   |
| W        | 2.8                | 5.6  | 2.4   | .3    | *  |       |           |          |          | 11.2       | 12.1  | 11.4  | 12.3  | 12.8  |
| NW       | 2.0                | 4.4  | 2.7   | .4    | .1 |       |           |          |          | 9.6        | 13.3  | 8.6   | 9.0   | 8.6   |
| VAR      | .0                 | .0   | .0    | .0    | .0 |       |           |          |          | .0         | .0    | .0    | .0    | .0    |
| CALM     | 2.3                |      |       |       |    |       |           |          |          | 2.3        | .0    | 2.8   | 3.1   | 1.7   |
| TOT OBS  | 466                | 893  | 418   | 46    | 9  | 1832  |           |          |          | 324        | 543   | 354   | 611   | 611   |
| TOT PCT  | 25.4               | 48.7 | 22.8  | 2.5   | .5 | 100.0 |           |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 |



PERIOD: (PRIMARY) 1908-1971  
(OVER-ALL) 1855-1971

JANUARY

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOU   | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|--------------------|------|-------|-------|-------|-----|-------|----------|-----------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | 2.8  | 5.9                | 44.4 | 37.0  | 8.6   | .9    | .3  | 11.7  | 100.0    | 324       |
| 06009 | 3.1  | 6.8                | 42.9 | 38.1  | 8.3   | .6    | .2  | 11.4  | 100.0    | 543       |
| 12015 | 1.7  | 6.2                | 41.2 | 38.7  | 11.9  | .3    | .0  | 12.1  | 100.0    | 354       |
| 18021 | 1.8  | 5.1                | 40.4 | 42.4  | 9.3   | 1.0   | .0  | 12.3  | 100.0    | 611       |
| TOT   | 4.3  | 10.9               | 77.0 | 72.3  | 17.2  | 1.3   | 2   | 11.9  |          | 1832      |
| PCT   | 2.3  | 5.9                | 42.0 | 39.5  | 9.4   | .7    | .1  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
|          |      |      |      |               |              |                        |
| N        | 3.2  | 3.1  | 5.0  | 2.0           |              | 4.5                    |
| NE       | 2.7  | 3.8  | 7.1  | 3.3           |              | 5.1                    |
| E        | 2.2  | 2.4  | 5.6  | 4.4           |              | 5.6                    |
| SE       | 1.8  | 1.4  | 3.2  | 1.8           |              | 4.9                    |
| S        | 1.3  | 1.2  | 3.6  | 3.2           |              | 5.6                    |
| SW       | 2.0  | 1.6  | 5.4  | 1.6           |              | 5.0                    |
| W        | 3.3  | 4.1  | 5.3  | 3.1           |              | 4.8                    |
| NW       | 2.4  | 1.9  | 2.9  | 1.6           |              | 4.5                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | 1.1  | .0   | .6   | .6            |              | 4.0                    |
| TOT OBS  | 94   | 91   | 181  | 101           | 467          | 5.0                    |
| TOT PCT  | 20.1 | 19.5 | 38.8 | 21.6          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
|         |            |            |            |            |              |              |              |              |              |       |                    |              |
| N       | .0         | .0         | .0         | 1.2        | 1.6          | 1.7          | .7           | .4           | .0           | .0    | 7.7                |              |
| NE      | .0         | .0         | .6         | 1.1        | 3.1          | 2.0          | 1.0          | .6           | .0           | .2    | 8.2                |              |
| E       | .0         | .0         | .2         | .9         | 4.2          | 1.9          | .6           | .2           | .0           | .0    | 6.6                |              |
| SE      | .0         | .0         | .0         | 1.3        | .6           | 1.0          | .6           | .0           | .0           | .1    | 4.7                |              |
| S       | .0         | .0         | .0         | 1.7        | 1.6          | 1.1          | .3           | .2           | .0           | .2    | 4.3                |              |
| SW      | .0         | .0         | .0         | 1.3        | 1.8          | 1.6          | .9           | .0           | .0           | .0    | 5.0                |              |
| W       | .2         | .0         | .2         | 1.7        | 2.7          | 1.3          | .2           | .0           | .0           | .0    | 9.5                |              |
| NW      | .0         | .0         | .0         | 1.1        | .5           | .5           | .7           | .0           | .0           | .0    | 5.9                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .2         | .2         | .4           | .2           | .0           | .0           | .0           | .0    | 1.3                |              |
| TOT OBS | 1          | 0          | 6          | 49         | 77           | 53           | 23           | 7            | 0            | 2     | 249                | 467          |
| TOT PCT | .2         | .0         | 1.3        | 10.5       | 16.5         | 11.3         | 4.9          | 1.5          | .0           | .4    | 53.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .4        | .4   | .4   | .4   | .4   | .4   | .4    | .4   |
| >5000             | 1.5       | 1.9  | 1.9  | 1.9  | 1.9  | 1.9  | 1.9   | 1.9  |
| >3500             | 5.3       | 6.6  | 6.6  | 6.6  | 6.6  | 6.6  | 6.6   | 6.6  |
| >2000             | 15.8      | 17.9 | 18.2 | 18.2 | 18.2 | 18.2 | 18.2  | 18.2 |
| >1000             | 28.8      | 33.5 | 34.4 | 34.6 | 34.6 | 34.6 | 34.6  | 34.6 |
| >600              | 37.6      | 43.8 | 44.7 | 44.9 | 44.9 | 44.9 | 44.9  | 44.9 |
| >300              | 38.5      | 45.1 | 45.9 | 46.2 | 46.2 | 46.2 | 46.2  | 46.2 |
| >150              | 38.5      | 45.1 | 45.9 | 46.2 | 46.2 | 46.2 | 46.2  | 46.2 |
| >0                | 38.7      | 45.3 | 46.2 | 46.4 | 46.4 | 46.4 | 46.4  | 46.4 |
| TOTAL             | 181       | 212  | 216  | 217  | 217  | 217  | 217   | 217  |

TOTAL NUMBER OF OBS: 468

PCT FREQ NH <5/8: 53.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1    | 2    | 3    | 4    | 5    | 6    | 7   | 8    | OBS CD | TOTAL<br>OBS |
|--|-----|------|------|------|------|------|------|-----|------|--------|--------------|
|  | 7.4 | 11.4 | 12.7 | 11.7 | 10.2 | 10.2 | 11.0 | 9.2 | 16.2 | .0     | 511          |

PERIOD: (PRIMARY) 1908-1971  
(OVER-ALL) 1855-1971

JANUARY

AREA 0002 MADEIRA ISLANDS  
32.0N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W    | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|-----|------|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .0   | .0   | .0  | .0  | .0  | .0   | .1  | .0  | .1   | .3    |              |
|              | TOT %  | .1   | .0   | .0   | .0  | .0  | .0  | .0   | .1  | .0  | .1   | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .1  | .1   | .0  | .0  | .0   | .3    |              |
|              | NO PCP | .1   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .1    |              |
|              | TOT %  | .1   | .0   | .0   | .0  | .0  | .1  | .1   | .0  | .0  | .0   | .4    |              |
| 2<5          | PCP    | .0   | *    | .3   | .0  | .1  | .0  | .1   | .1  | .0  | .0   | .7    |              |
|              | NO PCP | .1   | .0   | .4   | *   | .1  | *   | .0   | .0  | .0  | .0   | .7    |              |
|              | TOT %  | .1   | *    | .7   | *   | .3  | *   | .1   | .1  | .0  | .0   | 1.5   |              |
| 5<10         | PCP    | .6   | 1.2  | 1.1  | .4  | .6  | .3  | .6   | .8  | .0  | .0   | 5.5   |              |
|              | NO PCP | 3.2  | 5.1  | 3.0  | 2.1 | 2.0 | 2.2 | 2.5  | 1.4 | .0  | .3   | 21.7  |              |
|              | TOT %  | 3.7  | 6.3  | 4.1  | 2.4 | 2.5 | 2.5 | 3.1  | 2.2 | .0  | .3   | 27.3  |              |
| 10+          | PCP    | .1   | .5   | .3   | .0  | .1  | *   | 10.1 | .0  | .0  | .1   | 1.3   |              |
|              | NO PCP | 10.1 | 12.4 | 9.9  | 6.0 | 5.8 | 6.4 | 10.5 | 6.8 | .0  | 1.2  | 69.1  |              |
|              | TOT %  | 10.2 | 12.9 | 10.2 | 6.0 | 6.0 | 6.4 | 10.6 | 6.8 | .0  | 1.3  | 70.5  |              |
| TOT OBS      |        |      |      |      |     |     |     |      |     |     |      |       |              |
| TOT PCT      |        | 14.4 | 19.3 | 15.0 | 8.4 | 8.8 | 9.1 | 14.0 | 9.3 | .0  | 1.8  | 100.0 | 667          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W    | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|------|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .1  | .0   | .0  | .0  | .1   | .2    |              |
|              | 4-10       | *    | .0   | .0   | .0  | .0  | .0  | .0   | *   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | .0   | .0   | .0  | .0  | .1  | .0   | *   | .0  | .1   | .3    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
| 1<2          | 0-3        | .1   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .1    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .1   | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .0   | .0   | .0  | .0  | .1  | .1   | .0  | .0  | .0   | .3    |              |
| 2<5          | 0-3        | .0   | .1   | .0   | .0  | .0  | .0  | .1   | .0  | .0  | .0   | .2    |              |
|              | 4-10       | .1   | .0   | .0   | .0  | .2  | .1  | .0   | *   | .0  | .0   | .5    |              |
|              | 11-21      | .0   | *    | .3   | .2  | .2  | .1  | .3   | .1  | .0  | .0   | 1.2   |              |
|              | 22+        | .0   | .0   | .1   | .0  | .0  | .0  | .0   | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .1   | .4   | .2  | .4  | .2  | .4   | .1  | .0  | .0   | 2.0   |              |
| 5<10         | 0-3        | .2   | .1   | .1   | .0  | .0  | .1  | .3   | .1  | .0  | .3   | 1.2   |              |
|              | 4-10       | 1.1  | 1.2  | 1.3  | .6  | .3  | .7  | .9   | .2  | .0  | .0   | 6.4   |              |
|              | 11-21      | 1.4  | 2.6  | 1.5  | .7  | 1.4 | .7  | 1.2  | 1.1 | .0  | .0   | 10.5  |              |
|              | 22+        | .2   | .4   | .4   | .6  | .4  | .5  | .4   | .2  | .0  | .0   | 3.1   |              |
|              | TOT %      | 3.0  | 4.2  | 3.2  | 1.9 | 2.1 | 2.0 | 2.9  | 1.7 | .0  | .3   | 21.2  |              |
| 10+          | 0-3        | .5   | .5   | .4   | .3  | .5  | .8  | .7   | .2  | .0  | 1.2  | 5.1   |              |
|              | 4-10       | 4.6  | 6.9  | 7.1  | 4.5 | 3.1 | 2.4 | 3.8  | 3.6 | .0  | .0   | 36.1  |              |
|              | 11-21      | 4.2  | 6.6  | 4.1  | 2.4 | 1.9 | 2.3 | 5.3  | 3.2 | .0  | .0   | 30.1  |              |
|              | 22+        | .6   | .9   | .6   | .4  | .3  | .8  | .7   | .6  | .0  | .0   | 5.0   |              |
|              | TOT %      | 10.0 | 14.9 | 12.2 | 7.7 | 5.8 | 6.4 | 10.4 | 7.6 | .0  | 1.2  | 76.3  |              |
| TOT OBS      |            |      |      |      |     |     |     |      |     |     |      |       |              |
| TOT PCT      |            | 13.2 | 19.3 | 15.9 | 9.8 | 8.3 | 8.7 | 13.7 | 9.5 | .0  | 1.6  | 100.0 | 1066         |

PERIOD: (PRIMARY) 1908-1971  
(OVER-ALL) 1855-1971

# JANUARY

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HRUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .0         | .0         | 1.0        | 8.7        | 13.5         | 7.7          | 4.8          | 1.0          | .0           | .0    | 36.5  | 63.5                | 104          |
| 06009         | .0         | .0         | .8         | 11.7       | 16.7         | 5.8          | .8           | 1.7          | .0           | .0    | 37.5  | 62.5                | 120          |
| 12015         | .7         | .0         | 2.2        | 8.6        | 17.3         | 15.8         | 8.6          | 1.4          | .0           | .7    | 55.4  | 44.6                | 139          |
| 18021         | .0         | .0         | .8         | 10.8       | 14.6         | 13.1         | 4.6          | 1.5          | .0           | .8    | 46.2  | 53.8                | 130          |
| TOT           | 1          | 0          | 6          | 49         | 77           | 54           | 24           | 7            | 0            | 2     | 220   | 273                 | 493          |
| PCT           | .2         | .0         | 1.2        | 9.9        | 15.6         | 11.0         | 4.9          | 1.4          | .0           | .4    | 44.6  | 55.4                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HRUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .0    | .0  | 1.9 | 20.1 | 78.0 | 209          |
| 06009         | .6   | .0    | .3  | 2.9 | 21.3 | 74.8 | 314          |
| 12015         | .0   | .0    | .0  | 1.7 | 18.4 | 79.9 | 239          |
| 18021         | .3   | .0    | .6  | 1.2 | 24.3 | 73.5 | 321          |
| TOT           | 3    | 0     | 3   | 21  | 231  | 825  | 1083         |
| PCT           | .3   | .0    | .3  | 1.9 | 21.3 | 76.2 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HRUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .0            | 1.0        | 12.5        | 26.0            | 61.5               | 96           |
| 06009         | .0            | .9         | 14.0        | 25.4            | 60.5               | 114          |
| 12015         | .7            | 3.0        | 12.6        | 45.2            | 42.2               | 135          |
| 18021         | .0            | .8         | 13.8        | 34.1            | 52.0               | 123          |
| TOT           | 1             | 7          | 62          | 157             | 249                | 468          |
| PCT           | .2            | 1.5        | 13.2        | 33.5            | 53.2               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 70/74  | .0   | .0    | .0    | .2    | .0    | .6    | .0    | .0     | 4            | .8          |
| 65/69  | .0   | .0    | .0    | 1.0   | 3.2   | 7.6   | 9.4   | 6.0    | 136          | 27.1        |
| 60/64  | .0   | .0    | .4    | 3.2   | 15.2  | 22.0  | 18.8  | 6.0    | 328          | 65.5        |
| 55/59  | .0   | .0    | .0    | .6    | 1.0   | 2.0   | 1.8   | .8     | 31           | 6.2         |
| 50/54  | .0   | .0    | .0    | .0    | .0    | .2    | .0    | .2     | 2            | .4          |
| TOTAL  | 0    | 0     | 2     | 25    | 97    | 162   | 150   | 65     | 501          | 100.0       |
| PCT    | .0   | .0    | .4    | 5.0   | 19.4  | 32.3  | 29.9  | 13.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E    | SE  | S   | SW   | W    | NW  | VAR | CALM |
|-------|------|------|------|-----|-----|------|------|-----|-----|------|
| 70/74 | .1   | .0   | .0   | .0  | .0  | .2   | .2   | .2  | .0  | .0   |
| 65/69 | 1.3  | 1.1  | 3.4  | 3.2 | 5.0 | 5.4  | 5.3  | 1.8 | .0  | .4   |
| 60/64 | 10.5 | 14.2 | 10.2 | 5.2 | 4.7 | 4.4  | 8.8  | 5.7 | .0  | 1.8  |
| 55/59 | 1.1  | 2.0  | .7   | .2  | .2  | .2   | .7   | 1.3 | .0  | .0   |
| 50/54 | .2   | .0   | .0   | .0  | .0  | .0   | .0   | .0  | .0  | .2   |
| TOTAL | 13.3 | 17.3 | 14.4 | 8.5 | 9.9 | 10.1 | 15.0 | 9.1 | .0  | 2.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HRUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 68  | 67  | 66  | 62  | 57 | 54 | 52  | 61.8 | 325          |
| 06009         | 70  | 67  | 65  | 62  | 58 | 55 | 53  | 61.6 | 544          |
| 12015         | 73  | 70  | 68  | 64  | 59 | 55 | 54  | 63.9 | 351          |
| 18021         | 70  | 69  | 67  | 63  | 59 | 55 | 53  | 62.8 | 596          |
| TOT           | 73  | 69  | 67  | 62  | 58 | 55 | 52  | 62.5 | 1816         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HRUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.8   | 14.0  | 25.2  | 39.3  | 18.7   | 80   | 107          |
| 06009         | .0   | 3.5   | 16.8  | 39.2  | 29.4  | 11.2   | 78   | 143          |
| 12015         | .0   | 9.0   | 20.1  | 34.3  | 24.6  | 11.9   | 75   | 134          |
| 18021         | .0   | 5.5   | 26.8  | 29.1  | 28.3  | 10.2   | 76   | 127          |
| TOT           | 0    | 27    | 100   | 166   | 153   | 65     | 77   | 511          |



PERIOD: (PRIMARY) 1908-1971  
(OVER-ALL) 1855-1971

JANUARY

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | M<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .2       | .0       | .0       | 1     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .3       | .0       | .0       | 2     | .0       | .3        |
| 6                  | .0       | .0       | .0       | .5       | .0       | .0       | 3     | .0       | .5        |
| 5                  | .0       | .0       | .5       | .3       | .5       | .0       | 8     | .0       | 1.3       |
| 4                  | .0       | .0       | .3       | 1.0      | .5       | .2       | 12    | .0       | 2.0       |
| 3                  | .0       | .0       | .7       | 1.8      | .3       | .0       | 17    | .0       | 2.8       |
| 2                  | .0       | .0       | 1.1      | 4.9      | .2       | .0       | 38    | .0       | 6.2       |
| 1                  | .0       | .5       | 2.8      | 5.3      | .2       | .0       | 53    | .0       | 8.7       |
| 0                  | .0       | .3       | 7.4      | 5.7      | .0       | .0       | 82    | .0       | 13.5      |
| -1                 | .0       | .7       | 11.0     | 3.0      | .0       | .0       | 89    | .2       | 14.4      |
| -2                 | .0       | 2.0      | 9.9      | 1.1      | .0       | .0       | 79    | .5       | 12.5      |
| -3                 | .0       | 2.0      | 8.0      | 1.3      | .0       | .0       | 69    | .0       | 11.3      |
| -4                 | .0       | 2.8      | 6.6      | .3       | .0       | .0       | 59    | .0       | 9.7       |
| -5                 | .3       | 3.3      | 3.0      | .2       | .0       | .0       | 41    | .0       | 6.7       |
| -6                 | .3       | 2.6      | 1.3      | .2       | .0       | .0       | 27    | .0       | 4.4       |
| -7/-8              | .8       | 1.0      | 1.0      | .0       | .0       | .0       | 17    | .0       | 2.8       |
| -9/-10             | .3       | .8       | .7       | .0       | .0       | .0       | 11    | .0       | 1.8       |
| -14/-16            | .0       | .2       | .0       | .0       | .0       | .0       | 1     | .0       | .2        |
| TOTAL              | 11       | 98       | 159      | 1        | 609      | 4        | 605   |          |           |
| PCT                | 1.8      | 16.1     | 54.2     | 26.1     | 1.6      | .2       | 100.0 | .7       | 99.3      |

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .4   | .0    | .0    | .0    | .0  | .4   | .0  | 1.6  | .0    | .0    | .0    | .0  | 1.6  |
| 1-2     | .0  | 3.0  | .4    | .0    | .0    | .0  | 3.4  | .5  | 4.7  | 1.1   | .0    | .0    | .0  | 6.3  |
| 3-4     | .0  | .9   | 2.7   | .5    | .0    | .0  | 4.0  | .0  | 1.4  | 2.5   | .0    | .0    | .0  | 3.9  |
| 5-6     | .0  | .4   | .8    | .0    | .0    | .0  | 1.1  | .0  | .6   | 2.1   | .5    | .0    | .0  | 3.3  |
| 7       | .0  | .5   | .4    | 1.0   | .0    | .0  | 1.9  | .0  | .0   | 1.1   | .0    | .0    | .0  | 1.1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .5    | .0    | .0    | .0  | .5   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .5    | .0    | .0    | .0  | .5   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .1    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .0  | 5.2  | 4.2   | 1.5   | .0    | .0  | 10.9 | .5  | 8.3  | 8.0   | .5    | .1    | .0  | 17.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | 1.4  | .0    | .0    | .0    | .0  | 1.8  | .6  | 1.1  | .0    | .0    | .0    | .0  | 1.8 |
| 1-2     | .0  | 3.7  | .5    | .0    | .0    | .0  | 4.2  | .0  | 1.9  | 1.0   | .0    | .0    | .0  | 2.9 |
| 3-4     | .0  | 2.1  | 2.8   | .5    | .0    | .0  | 5.4  | .0  | .5   | 1.1   | .0    | .0    | .0  | 1.6 |
| 5-6     | .0  | .0   | 1.0   | .0    | .0    | .0  | 1.0  | .0  | .0   | 1.0   | .0    | .0    | .0  | 1.0 |
| 7       | .0  | .5   | .5    | .0    | .0    | .0  | 1.0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | 1.5   | .0    | .0  | 1.5  | .0  | .0   | .5    | .0    | .0    | .0  | .5  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .4    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 7.7  | 4.8   | 2.0   | .4    | .0  | 15.3 | .6  | 3.5  | 3.8   | .6    | .0    | .0  | 8.6 |

PERIOD: (OVER-ALL) 1963-1971

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 1.0  | .0    | .0    | .0    | .0  | 1.4  | .1  | 1.0  | .5    | .0    | .0    | .0  | 1.6  |
| 1-2     | .0  | 3.2  | .0    | .0    | .0    | .0  | 3.2  | .0  | 1.8  | 1.5   | .0    | .0    | .0  | 3.3  |
| 3-4     | .0  | 1.0  | 2.4   | .0    | .0    | .0  | 3.4  | .0  | .3   | 1.5   | .5    | .0    | .0  | 2.3  |
| 5-6     | .0  | .0   | 1.4   | .0    | .0    | .0  | 1.4  | .0  | .5   | 3.3   | 1.5   | .0    | .0  | 5.3  |
| 7       | .0  | .0   | 1.4   | .0    | .0    | .0  | 1.4  | .5  | .0   | .5    | 2.5   | .0    | .0  | 3.5  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .5    | .0    | .0    | .0  | .5   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .4    | .0    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 5.2  | 5.2   | .4    | .0    | .0  | 11.1 | .6  | 3.5  | 7.8   | 4.5   | .0    | .0  | 16.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | 1.0  | .0    | .0    | .0    | .0  | 1.0  | .0  | .5   | .5    | .0    | .0    | .0  | 1.0 |           |
| 1-2     | .0  | .9   | .0    | .0    | .0    | .0  | .9   | .0  | .6   | .5    | .0    | .0    | .0  | 1.1 |           |
| 3-4     | .5  | 2.1  | 3.7   | .0    | .0    | .0  | 6.3  | .0  | 1.8  | 1.0   | .0    | .0    | .0  | 2.8 |           |
| 5-6     | .0  | .0   | 1.9   | .0    | .0    | .0  | 1.9  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 7       | .0  | .0   | .5    | .5    | .0    | .0  | 1.0  | .0  | .0   | .5    | .0    | .0    | .0  | .5  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .5    | .0    | .0    | .0  | .5  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .5    | .0    | .0  | .5   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .5    | .0    | .0  | .5   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .5  | 4.0  | 6.1   | 1.5   | .0    | .0  | 12.1 | .0  | 2.9  | 3.2   | .0    | .0    | .0  | 6.1 | 98.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.5 | 8.0  | 1.0   | .0    | .0    | .0  | 12.6  |         |
| 1-2     | 1.0 | 19.6 | 5.0   | .0    | .0    | .0  | 25.6  |         |
| 3-4     | .5  | 10.1 | 17.6  | 1.5   | .0    | .0  | 29.6  |         |
| 5-6     | .0  | 1.5  | 11.6  | 2.0   | .0    | .0  | 15.1  |         |
| 7       | .5  | 1.0  | 5.0   | 4.0   | .0    | .0  | 10.6  |         |
| 8-9     | .0  | .0   | 2.0   | 1.5   | .0    | .0  | 3.5   |         |
| 10-11   | .0  | .0   | .5    | .0    | .0    | .0  | .5    |         |
| 12      | .0  | .0   | .0    | 1.5   | .0    | .0  | 1.5   |         |
| 13-16   | .0  | .0   | .0    | .5    | .5    | .0  | 1.0   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.5 | 40.2 | 42.7  | 11.1  | .5    | .0  | 100.0 | 199     |

PERIOD: (OVER-ALL) 1949-1971

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.5 | 5.9  | 9.9  | 4.6  | 2.0  | .5   | .8    | .0  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100   | 4        |
| 6-7          | .3  | 1.5  | 5.1  | 9.4  | 5.3  | 3.8  | .8    | .8  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 106   | 6        |
| 8-9          | .0  | 1.0  | 1.8  | 3.3  | 3.8  | 1.8  | 2.0   | .0  | .8    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 57    | 7        |
| 10-11        | .0  | .5   | 2.3  | 1.3  | 1.3  | 2.8  | 1.0   | 1.0 | .8    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 43    | 8        |
| 12-13        | .0  | .0   | 1.8  | .0   | 1.0  | 1.0  | .8    | .5  | .5    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 23    | 8        |
| >13          | .0  | .0   | .0   | .3   | .8   | .8   | 1.3   | .0  | .0    | .0    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 13    | 9        |
| INDET        | 1.0 | 1.5  | 2.8  | 3.6  | 1.8  | 1.5  | .5    | .0  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 51    | 5        |
| TOTAL        | 11  | 41   | 93   | 88   | 63   | 48   | 28    | 9   | 10    | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 393   | 6        |
| PCT          | 2.8 | 10.4 | 23.7 | 22.4 | 16.0 | 12.2 | 7.1   | 2.3 | 2.5   | .3    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1903-1971  
(OVER-ALL) 1855-1971

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TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 | NO SIG WEA |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST |            |
| N        | .0                 | 6.5       | .0   | .0        | .0   | .0              | .0   | 7.1                     | 2.5            | 1.2       | .0          | .0                  | .0         | .0              | 89.2       |
| NE       | 1.1                | 2.6       | .7   | .0        | .0   | .0              | .0   | 4.4                     | .4             | .7        | 1.5         | .0                  | .0         | .0              | 93.1       |
| E        | .0                 | 2.0       | .0   | .0        | .0   | .0              | .0   | 2.0                     | .5             | .0        | 2.0         | .0                  | .0         | .0              | 95.5       |
| SE       | 1.9                | 1.0       | 2.9  | .0        | .0   | .0              | .0   | 3.8                     | 3.8            | .0        | .0          | .0                  | 1.9        | .0              | 90.4       |
| S        | 2.4                | .0        | 1.2  | .0        | .0   | .0              | .0   | 3.6                     | 4.2            | .0        | .0          | .0                  | .0         | .0              | 92.3       |
| SW       | 1.9                | 3.7       | .5   | .0        | .0   | .0              | .0   | 6.1                     | 6.1            | .9        | .5          | .0                  | .0         | .0              | 86.5       |
| W        | 1.7                | 5.1       | 2.1  | .0        | .0   | .0              | .0   | 8.9                     | 3.2            | .0        | 1.3         | .0                  | .0         | .0              | 86.7       |
| NW       | .0                 | 5.1       | .0   | .0        | .0   | .0              | .0   | 5.1                     | 4.3            | 1.1       | .0          | .0                  | .0         | .0              | 89.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| TOT PCT  | 1.1                | 3.5       | .8   | .0        | .0   | .0              | .0   | 5.3                     | 2.8            | .5        | .8          | .0                  | .1         | .0              | 90.4       |
| TOT OBS: | 739                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 | NO SIG WEA |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST |            |
| 00003      | 2.7                | 1.4       | 1.4  | .0        | .0   | .0              | .0   | 5.5                     | 1.4            | 2.1       | .7          | .0                  | .7         | .0              | 89.7       |
| 06009      | 2.0                | 4.5       | .5   | .0        | .0   | .0              | .0   | 7.0                     | 4.0            | .5        | 1.5         | .0                  | .0         | .0              | 86.9       |
| 12015      | .9                 | 3.2       | .5   | .0        | .0   | .0              | .0   | 4.1                     | 4.1            | .0        | .5          | .0                  | .0         | .0              | 91.3       |
| 18021      | .5                 | 4.9       | 1.5  | .0        | .0   | .0              | .0   | 6.8                     | 1.0            | .0        | 1.0         | .0                  | .0         | .0              | 91.3       |
| TOT PCT    | 1.4                | 3.6       | .9   | .0        | .0   | .0              | .0   | 5.9                     | 2.7            | .5        | .9          | .0                  | .1         | .0              | 89.9       |
| TOT OBS:   | 769                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |     |  |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-----|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21  |  |
| N        | .5                 | 5.8  | 5.3   | 1.4   | .3    | .0 | 13.2 | 12.8  | 12.8      | .0       | 13.8     | 12.7       | 11.8  | .0    | 14.1  | 15.5  |     |  |
| NE       | 1.1                | 8.8  | 9.2   | 1.5   | .4    | .0 | 21.0 | 12.5  | 23.3      | 12.5     | 22.3     | 21.5       | 17.7  | 12.5  | 20.9  | 21.3  |     |  |
| E        | 1.3                | 6.8  | 4.6   | 1.0   | .0    | .0 | 13.7 | 10.5  | 13.2      | 25.0     | 15.1     | 15.4       | 13.8  | 4.2   | 11.6  | 13.4  |     |  |
| SE       | .4                 | 3.5  | 2.4   | .5    | .1    | .0 | 7.0  | 11.4  | 6.5       | .0       | 4.5      | 7.8        | 8.8   | .0    | 8.2   | 6.6   |     |  |
| S        | .5                 | 3.0  | 1.8   | .6    | .1    | .0 | 6.0  | 11.1  | 6.3       | 25.0     | 4.3      | 6.8        | 5.7   | 12.5  | 6.5   | 6.2   |     |  |
| SW       | .8                 | 3.8  | 4.4   | 1.4   | .5    | .0 | 10.9 | 14.2  | 10.4      | 12.5     | 11.3     | 8.3        | 13.3  | 25.0  | 11.2  | 8.7   |     |  |
| W        | .8                 | 3.2  | 5.6   | 1.7   | .8    | .2 | 12.3 | 16.1  | 13.0      | 12.5     | 13.1     | 8.3        | 14.7  | 29.2  | 12.8  | 8.3   |     |  |
| NW       | .7                 | 4.7  | 4.8   | 2.0   | .2    | .0 | 12.5 | 13.7  | 11.9      | 12.5     | 12.3     | 14.2       | 10.5  | 16.7  | 11.7  | 16.3  |     |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 | .0   | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    |     |  |
| CALM     | 3.4                |      |       |       |       |    | 3.4  | .0    | 2.5       | .0       | 3.4      | 5.0        | 3.7   | .0    | 2.9   | 3.7   |     |  |
| TOT OBS  | 194                | 790  | 761   | 201   | 48    | 7  | 2001 |       | 12.5      | 357      | 8        | 384        | 222   | 401   | 12    | 375   | 242 |  |
| TOT PCT  | 9.7                | 39.5 | 38.0  | 10.0  | 2.4   | .3 |      | 100.0 |           | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 |     |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 3.3                | 6.1  | 3.0   | .7    | .1  |           | 13.2     | 12.8     | 12.5       | 13.4  | 11.4  | 14.6  |    |
| NE       | 4.1                | 11.3 | 4.5   | 1.0   | .1  |           | 21.0     | 12.5     | 23.1       | 22.0  | 17.6  | 21.1  |    |
| E        | 4.0                | 7.6  | 1.9   | .2    | .0  |           | 13.7     | 10.5     | 13.5       | 15.2  | 13.6  | 12.3  |    |
| SE       | 1.8                | 3.8  | 1.2   | .2    | .0  |           | 7.0      | 11.4     | 6.4        | 5.7   | 8.5   | 7.6   |    |
| S        | 2.2                | 2.4  | 1.0   | .4    | .0  |           | 6.0      | 11.1     | 6.7        | 5.2   | 5.9   | 6.4   |    |
| SW       | 2.6                | 4.2  | 3.0   | .9    | .1  |           | 10.9     | 14.2     | 10.4       | 10.2  | 13.6  | 10.2  |    |
| W        | 2.1                | 4.9  | 3.7   | 1.1   | .5  |           | 12.3     | 16.1     | 13.0       | 11.3  | 15.1  | 11.0  |    |
| NW       | 2.6                | 5.7  | 3.3   | .7    | .1  |           | 12.5     | 13.7     | 11.9       | 13.0  | 10.7  | 13.5  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.4                |      |       |       |     |           | 3.4      | .0       | 2.5        | 4.0   | 3.6   | 3.2   |    |
| TOT OBS  | 522                | 925  | 431   | 104   | 19  | 2001      |          | 12.5     | 365        | 606   | 413   | 617   |    |
| TOT PCT  | 26.1               | 46.2 | 21.5  | 5.2   | .9  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1903-1971  
(OVER-ALL) 1855-1971

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32.6N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | 2.5  | 6.0 | 41.9 | 40.3               | 6.3   | 2.7   | .3  | 12.0  | 100.0    | 365       |
| 06009 | 4.0  | 7.9 | 39.9 | 34.8               | 10.4  | 2.6   | .3  | 12.1  | 100.0    | 606       |
| 12015 | 3.6  | 4.6 | 38.5 | 37.5               | 12.8  | 2.7   | .2  | 13.3  | 100.0    | 413       |
| 18021 | 3.2  | 6.0 | 38.2 | 40.2               | 10.0  | 1.8   | .5  | 12.6  | 100.0    | 617       |
| TOT   | 68   | 126 | 790  | 761                | 201   | 48    | 7   | 12.5  |          | 2001      |
| PCT   | 3.4  | 6.3 | 39.5 | 38.0               | 10.0  | 2.4   | .3  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 1.8  | 2.8  | 3.4  | 2.3          |              | 5.0                    |
| NE       | 4.2  | 2.6  | 6.1  | 2.6          |              | 4.6                    |
| E        | 2.7  | 2.2  | 4.2  | 2.0          |              | 4.7                    |
| SE       | 1.0  | 1.2  | 2.7  | 1.9          |              | 5.4                    |
| S        | .7   | 1.4  | 2.6  | 1.7          |              | 5.4                    |
| SW       | 2.7  | 3.1  | 7.9  | 3.7          |              | 5.1                    |
| W        | 3.2  | 4.2  | 7.0  | 4.1          |              | 5.1                    |
| NW       | 3.8  | 3.2  | 5.4  | .5           |              | 4.1                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .2   | .4   | .4   | .2           |              | 5.1                    |
| TOT OBS  | 99   | 103  | 194  | 93           | 489          | 4.9                    |
| TOT PCT  | 20.2 | 21.1 | 39.7 | 19.0         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .0  | .0  | .2  | .6  | 1.5  | 1.5  | .5   | .0   | .6   | .0    | 5.4     |       |
| .0  | .0  | .0  | .9  | 2.1  | 1.8  | .9   | .2   | .0   | .0    | 9.5     |       |
| .0  | .0  | .0  | .4  | 1.0  | 1.4  | 1.0  | .2   | .0   | .0    | 7.1     |       |
| .0  | .0  | .0  | 1.0 | .4   | .2   | 1.5  | .0   | .2   | .2    | 3.3     |       |
| .0  | .0  | .0  | .6  | .7   | .5   | .8   | .1   | .2   | .2    | 3.3     |       |
| .2  | .0  | .0  | 1.5 | 1.8  | 1.9  | .8   | .1   | .1   | .6    | 10.5    |       |
| .0  | .0  | .0  | 2.4 | 2.6  | 1.7  | .8   | .0   | .2   | .0    | 10.7    |       |
| .0  | .0  | .2  | .9  | 2.0  | 1.0  | .5   | .0   | .2   | .0    | 8.0     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .0  | .4   | .2   | .0   | .0   | .0   | .0    | .6      |       |
| 1   | 0   | 2   | 40  | 62   | 50   | 34   | 3    | 7    | 5     | 285     | 489   |
| .2  | .0  | .4  | 8.2 | 12.7 | 10.2 | 7.0  | .6   | 1.4  | 1.0   | 58.3    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | # OR<br>>10 | # OR<br>>5 | # OR<br>>2 | # OR<br>>1 | # OR<br>>1/2 | # OR<br>>1/4 | # OR<br>>50YD | # OR<br>>0 |
| # OR >6500        | 1.8         | 2.2        | 2.2        | 2.2        | 2.2          | 2.2          | 2.2           | 2.2        |
| # OR >5000        | 2.2         | 2.9        | 3.1        | 3.1        | 3.1          | 3.1          | 3.1           | 3.1        |
| # OR >3500        | 8.6         | 9.8        | 10.0       | 10.2       | 10.2         | 10.2         | 10.2          | 10.2       |
| # OR >2000        | 15.5        | 19.2       | 19.8       | 20.0       | 20.0         | 20.0         | 20.0          | 20.0       |
| # OR >1000        | 25.7        | 31.8       | 32.7       | 32.9       | 32.9         | 32.9         | 32.9          | 32.9       |
| # OR >600         | 31.2        | 39.4       | 40.4       | 41.0       | 41.0         | 41.0         | 41.0          | 41.0       |
| # OR >300         | 31.4        | 39.8       | 40.8       | 41.4       | 41.4         | 41.4         | 41.4          | 41.4       |
| # OR >150         | 31.4        | 39.8       | 40.8       | 41.4       | 41.4         | 41.4         | 41.4          | 41.4       |
| # OR >0           | 31.4        | 39.8       | 40.8       | 41.4       | 41.4         | 41.4         | 41.6          | 41.6       |
| TOTAL             | 154         | 195        | 200        | 203        | 203          | 203          | 204           | 204        |

TOTAL NUMBER OF OBS: 490

PCT FREQ NH <5/8: 58.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|-----|-----|------|-------|--------------|
| 6.7 | 10.1 | 15.2 | 13.1 | 12.9 | 9.4 | 9.2 | 8.8 | 14.4 | .2    | 534          |

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/G 4/2  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
NOV 76

F/G 4/2

NL

2 OF 7  
ADA031778



PERIOD: (PRIMARY) 1903-1971  
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32.6N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .1   | .1   | .0   | .0  | .0   | .3    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .1   | .1   | .0   | .0  | .0   | .3    |              |
| 1/2<1        | PCP    | .0   | .1   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .3   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .3    |              |
|              | TOT %  | .0   | .4   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .4    |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .1   | .1   | .0   | .0  | .0   | .3    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .1  | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .1  | .1   | .1   | .0   | .0  | .0   | .4    |              |
| 2<5          | PCP    | .0   | .0   | .0   | .0  | .0  | .3   | .1   | .0   | .0  | .0   | .4    |              |
|              | NO PCP | .0   | .0   | .2   | .2  | .2  | .4   | .3   | .0   | .0  | .0   | 1.2   |              |
|              | TOT %  | .0   | .0   | .2   | .2  | .2  | .4   | .6   | .1   | .0  | .0   | 1.6   |              |
| 5<10         | PCP    | .6   | .6   | .3   | .1  | .2  | .1   | .5   | .4   | .0  | .0   | 2.9   |              |
|              | NO PCP | 2.9  | 6.5  | 4.4  | 2.4 | 1.3 | 2.6  | 4.3  | 4.0  | .0  | .3   | 28.8  |              |
|              | TOT %  | 3.5  | 7.1  | 4.7  | 2.6 | 1.5 | 2.8  | 4.8  | 4.4  | .0  | .3   | 31.7  |              |
| 10+          | PCP    | .2   | .1   | .0   | .1  | .0  | .5   | .3   | .2   | .0  | .0   | 1.4   |              |
|              | NO PCP | 7.3  | 11.0 | 8.6  | 4.1 | 3.9 | 10.4 | 10.0 | 8.1  | .0  | .8   | 64.3  |              |
|              | TOT %  | 7.4  | 11.1 | 8.6  | 4.3 | 3.9 | 10.9 | 10.4 | 8.3  | .0  | .8   | 65.6  |              |
| TOT OBS      |        |      |      |      |     |     |      |      |      |     |      |       | 736          |
| TOT PCT      |        | 11.0 | 18.6 | 13.5 | 7.1 | 5.7 | 14.3 | 16.0 | 12.7 | .0  | 1.1  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0   | .1   | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0   | .0   | .0   | .0  | .0  | .1   | .1   | .0   | .0  | .0   | .2    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .3   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .3    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .0   | .3   | .0   | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .3    |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .1   | .0  | .0  | .0   | .1   | .0   | .0  | .0   | .3    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .1   | .2   | .0   | .0  | .0   | .3    |              |
|              | TOT %      | .0   | .0   | .1   | .0  | .1  | .2   | .1   | .0   | .0  | .0   | .5    |              |
| 2<5          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .1   | .1   | .1  | .1  | .0   | .0   | .1   | .0  | .0   | .4    |              |
|              | 11-21      | .0   | .2   | .2   | .2  | .3  | .1   | .3   | .0   | .0  | .0   | 1.1   |              |
|              | 22+        | .0   | .0   | .0   | .0  | .2  | .2   | .6   | .1   | .0  | .0   | 1.3   |              |
|              | TOT %      | .0   | .3   | .3   | .5  | .5  | .3   | .8   | .2   | .0  | .0   | 2.8   |              |
| 5<10         | 0-3        | .1   | .3   | .3   | .1  | .2  | .0   | .1   | .1   | .0  | .3   | 1.6   |              |
|              | 4-10       | 1.2  | 2.2  | 2.2  | 1.0 | .6  | .4   | .6   | 1.7  | .0  | .0   | 9.9   |              |
|              | 11-21      | 1.6  | 3.5  | 1.6  | .9  | .9  | 1.7  | 1.9  | 1.3  | .0  | .0   | 13.3  |              |
|              | 22+        | .5   | .2   | .0   | .1  | .4  | .8   | .8   | .3   | .0  | .0   | 3.2   |              |
|              | TOT %      | 3.4  | 6.2  | 4.1  | 2.2 | 2.1 | 3.0  | 3.5  | 3.4  | .0  | .3   | 28.0  |              |
| 10+          | 0-3        | .3   | .9   | .9   | .2  | .3  | .3   | .6   | .8   | .0  | 1.2  | 5.5   |              |
|              | 4-10       | 4.9  | 5.4  | 5.0  | 2.2 | 2.3 | 3.5  | 2.6  | 3.3  | .0  | .0   | 29.3  |              |
|              | 11-21      | 3.0  | 5.9  | 3.6  | 1.7 | 1.2 | 4.0  | 4.2  | 3.2  | .0  | .0   | 26.9  |              |
|              | 22+        | .9   | .8   | .6   | .3  | .4  | .9   | 1.4  | 1.1  | .0  | .0   | 6.5   |              |
|              | TOT %      | 9.0  | 13.0 | 10.2 | 4.5 | 4.2 | 8.8  | 8.8  | 8.4  | .0  | 1.2  | 68.1  |              |
| TOT OBS      |            |      |      |      |     |     |      |      |      |     |      |       | 1158         |
| TOT PCT      |            | 12.5 | 19.7 | 14.7 | 7.1 | 6.8 | 12.5 | 13.3 | 11.9 | .0  | 1.5  | 100.0 |              |



PERIOD: (PRIMARY) 1903-1971  
(OVER-ALL) 1855-1971

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AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .0         | 1.0        | 2.9        | 11.7         | 8.7          | 4.9          | 1.9          | 1.0          | 1.0   | 33.0  | 67.0               | 103          |
| 06009         | 1.0        | .0         | 1.0        | 8.7        | 14.6         | 7.8          | 1.9          | 1.0          | 1.9          | .0    | 37.9  | 62.1               | 103          |
| 12015         | .0         | .0         | .0         | 8.1        | 12.8         | 10.5         | 9.3          | .6           | 1.2          | .6    | 43.0  | 57.0               | 172          |
| 18021         | .0         | .0         | .0         | 10.0       | 10.7         | 10.7         | 8.6          | .0           | 1.4          | 2.1   | 43.6  | 56.4               | 140          |
| TOT           | 1          | 0          | 2          | 40         | 64           | 50           | 35           | 4            | 7            | 5     | 208   | 310                | 518          |
| PCT           | .2         | .0         | .4         | 7.7        | 12.4         | 9.7          | 6.8          | .8           | 1.4          | 1.0   | 40.2  | 59.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .4   | .4    | .0  | 3.4 | 28.3 | 67.4 | 233          |
| 06009         | .3   | .3    | .6  | 3.3 | 35.0 | 60.4 | 331          |
| 12015         | .0   | .3    | .3  | 1.4 | 27.3 | 70.6 | 286          |
| 18021         | .0   | .6    | .9  | 3.0 | 24.3 | 71.3 | 338          |
| TOT           | 2    | 5     | 6   | 33  | 342  | 800  | 1188         |
| PCT           | .2   | .4    | .5  | 2.8 | 28.8 | 67.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .0            | 1.1        | 6.5         | 29.0            | 64.5              | 93           |
| 06009         | 1.0           | 2.1        | 12.5        | 27.1            | 60.4              | 96           |
| 12015         | .0            | .0         | 9.8         | 35.6            | 54.6              | 163          |
| 18021         | .0            | .0         | 11.6        | 32.6            | 55.8              | 138          |
| TOT           | 1             | 3          | 50          | 156             | 284               | 490          |
| PCT           | .2            | .6         | 10.2        | 31.8            | 58.0              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 70/74  | .0   | .0    | .0    | .8    | .2    | .6    | .0    | .0     | 8            | 1.6         |
| 65/69  | .0   | .0    | .2    | .8    | 1.2   | 5.6   | 7.8   | 2.6    | 91           | 18.3        |
| 60/64  | .0   | .0    | .0    | 5.6   | 15.3  | 21.9  | 18.3  | 5.0    | 329          | 66.1        |
| 55/59  | .0   | .0    | .2    | .6    | 4.0   | 3.8   | 3.8   | 1.4    | 69           | 13.9        |
| 50/54  | .0   | .0    | .0    | .0    | .2    | .0    | .0    | .0     | 1            | .2          |
| TOTAL  | 0    | 0     | 2     | 39    | 104   | 159   | 149   | 45     | 498          | 100.0       |
| PCT    | .0   | .0    | .4    | 7.8   | 20.9  | 31.9  | 29.9  | 9.0    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW   | W    | NW   | VAR | CALM |
|------|------|------|-----|-----|------|------|------|-----|------|
| .1   | .4   | .3   | .0  | .0  | .4   | .3   | .2   | .0  | .0   |
| .4   | 2.5  | 1.3  | 1.9 | 1.9 | 6.7  | 3.5  | .3   | .0  | .0   |
| 6.5  | 12.2 | 7.2  | 4.5 | 4.7 | 8.8  | 11.3 | 10.0 | .0  | .8   |
| 3.2  | 4.8  | 1.2  | .2  | .2  | .4   | .5   | 3.2  | .0  | .2   |
| .0   | .0   | .0   | .0  | .0  | .0   | .2   | .0   | .0  | .0   |
| 10.2 | 19.9 | 10.0 | 6.5 | 6.7 | 16.3 | 15.7 | 13.7 | .0  | 1.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 68  | 66  | 65  | 61  | 57 | 55 | 50  | 61.0 | 366          |
| 06009         | 73  | 67  | 65  | 61  | 57 | 54 | 50  | 60.7 | 614          |
| 12015         | 74  | 71  | 69  | 63  | 58 | 54 | 54  | 63.4 | 406          |
| 18021         | 74  | 70  | 67  | 62  | 58 | 56 | 54  | 62.3 | 600          |
| TOT           | 74  | 69  | 67  | 62  | 57 | 55 | 50  | 61.8 | 1986         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 4.1   | 20.4  | 25.5  | 40.8  | 9.2    | 78   | 98           |
| 06009         | .0   | 6.9   | 23.8  | 30.0  | 29.2  | 10.0   | 76   | 130          |
| 12015         | .0   | 12.1  | 20.4  | 30.6  | 27.4  | 9.6    | 74   | 137          |
| 18021         | .0   | 7.0   | 18.6  | 41.9  | 26.4  | 6.2    | 75   | 129          |
| TOT           | 0    | 41    | 107   | 166   | 155   | 45     | 76   | 514          |

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PERIOD: (PRIMARY) 1903-1971  
(OVER-ALL) 1855-1971AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .4       | .0       | .0       | .0       | 3     | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .0       | .7       | .4       | 8     | .0       | 1.1       |
| 6                  | .0       | .0       | .0       | .0       | .3       | .1       | .0       | 3     | .0       | .4        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .6       | .0       | 5     | .0       | .7        |
| 4                  | .0       | .0       | .0       | .7       | 2.0      | .0       | .1       | 20    | .0       | 2.9       |
| 3                  | .0       | .1       | .0       | 1.1      | 1.6      | .6       | .0       | 24    | .1       | 3.3       |
| 2                  | .0       | .0       | .0       | 2.6      | 3.1      | .4       | .0       | 43    | .1       | 6.0       |
| 1                  | .0       | .0       | .0       | 7.1      | 3.0      | .0       | .0       | 71    | .3       | 9.8       |
| 0                  | .0       | .0       | .3       | 10.1     | 3.6      | .0       | .0       | 98    | .1       | 13.8      |
| -1                 | .0       | .0       | 1.9      | 11.3     | 1.0      | .3       | .0       | 101   | .1       | 14.3      |
| -2                 | .0       | .0       | 4.1      | 9.0      | .7       | .0       | .0       | 97    | .0       | 13.8      |
| -3                 | .0       | .0       | 5.1      | 5.1      | .4       | .0       | .0       | 75    | .0       | 10.7      |
| -4                 | .0       | .1       | 6.3      | 2.9      | .1       | .0       | .0       | 66    | .1       | 9.3       |
| -5                 | .0       | .1       | 3.7      | 1.4      | .0       | .0       | .0       | 37    | .0       | 5.3       |
| -6                 | .0       | .1       | 2.0      | .3       | .0       | .0       | .0       | 17    | .0       | 2.4       |
| -7/-8              | .0       | .3       | 1.4      | 1.0      | .1       | .0       | .0       | 20    | .0       | 2.9       |
| -9/-10             | .1       | .4       | .4       | .6       | .0       | .0       | .0       | 11    | .0       | 1.6       |
| -11/-13            | .0       | .0       | .1       | .0       | .0       | .0       | .0       | 1     | .0       | .1        |
| -14/-16            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 2        | 9        | 178      | 376      | 113      | 19       | 4        | 701   | 7        | 694       |
| PCT                | .3       | 1.3      | 25.4     | 53.6     | 16.1     | 2.7      | .6       | 100.0 | 1.0      | 99.0      |

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT | NE  |      |       |       |       |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | 1.0  | .0    | .0    | .0    | .0  | 1.0  |
| 1-2     | .0  | 1.7  | .7    | .0    | .0    | .0  | 2.5 | .0  | 2.5  | 1.5   | .0    | .0    | .0  | 3.9  |
| 3-4     | .0  | 1.1  | .9    | .0    | .0    | .0  | 2.0 | .0  | 2.2  | 2.7   | .0    | .0    | .0  | 4.9  |
| 5-6     | .0  | .0   | 2.2   | .0    | .0    | .0  | 2.2 | .0  | .0   | .7    | .0    | .0    | .0  | .7   |
| 7       | .0  | .0   | .5    | .0    | .0    | .0  | .5  | .0  | .0   | .5    | .5    | .0    | .0  | 1.0  |
| 8-9     | .0  | .0   | .0    | .4    | .0    | .0  | .4  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .0  | 2.8  | 4.3   | .4    | .0    | .0  | 7.5 | .0  | 5.6  | 5.4   | .7    | .0    | .0  | 11.8 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 1.8  | 1.3   | .0    | .0    | .0  | 3.2 | .0  | 1.6  | 1.1   | .0    | .0    | .0  | 3.2 |
| 3-4     | .0  | 1.3  | .4    | .0    | .0    | .0  | 1.7 | .0  | .5   | 1.6   | .0    | .0    | .0  | 2.1 |
| 5-6     | .0  | .0   | .9    | .0    | .0    | .0  | .9  | .0  | .5   | .5    | .0    | .0    | .0  | 1.0 |
| 7       | .0  | .0   | .0    | .5    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .5    | .0    | .0  | .5  |
| 10-11   | .0  | .0   | .0    | .4    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 3.7  | 2.6   | .9    | .0    | .0  | 7.1 | .5  | 2.6  | 3.2   | .5    | .0    | .0  | 6.7 |



PERIOD: (OVER-ALL) 1963-1971

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AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |
| <1      | .9  | .0   | .0    | .0    | .0    | .0  | .9  | .6  | 1.0  | .0    | .0    | .0    | .0  | .6  | 1.6  |
| 1-2     | .0  | .5   | .5    | .0    | .0    | .0  | 1.0 | .0  | 2.3  | 2.0   | .0    | .0    | .0  | .0  | 4.3  |
| 3-4     | .0  | .9   | .9    | .0    | .0    | .0  | 1.7 | .0  | 1.6  | 4.0   | .5    | .0    | .0  | .0  | 6.1  |
| 5-6     | .0  | .0   | .0    | .4    | .0    | .0  | .4  | .0  | .6   | 3.1   | .2    | .0    | .0  | .0  | 3.9  |
| 7       | .0  | .0   | .7    | .0    | .0    | .0  | .7  | .0  | .0   | 4.9   | .7    | .0    | .0  | .0  | 5.6  |
| 8-9     | .0  | .0   | .0    | .5    | .0    | .0  | .5  | .0  | .0   | 1.0   | 1.1   | .5    | .0  | .0  | 2.6  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .5    | .0    | .0  | .0  | .5   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .5    | .1    | .0  | .0  | .6   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| TOT PCT | .9  | 1.3  | 2.1   | .9    | .0    | .0  | 5.1 | .6  | 5.5  | 15.0  | 3.6   | .6    | .0  | .0  | 25.2 |

| HGT     | W   |      |       |       |       |     |      | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | 1.0  | .0    | .0    | .0    | .0  | .0  | 1.0  |           |
| 1-2     | .0  | 1.6  | 1.3   | .0    | .0    | .0  | 2.9  | .0  | 3.2  | 1.3   | .0    | .0    | .0  | .0  | 4.5  |           |
| 3-4     | .0  | .5   | 3.8   | .0    | .0    | .0  | 4.3  | .0  | .7   | 1.5   | .0    | .0    | .0  | .0  | 2.2  |           |
| 5-6     | .0  | .9   | 3.7   | .4    | .0    | .0  | 4.9  | .0  | .0   | .2    | .0    | .0    | .0  | .0  | .2   |           |
| 7       | .0  | .5   | 3.1   | 2.2   | .0    | .0  | 5.8  | .0  | .0   | 2.6   | .0    | .0    | .0  | .0  | 2.6  |           |
| 8-9     | .0  | .0   | .5    | .9    | 1.0   | .0  | 2.3  | .0  | .0   | .0    | .5    | .0    | .0  | .0  | .5   |           |
| 10-11   | .0  | .0   | .0    | .0    | 1.0   | 1.0 | 2.0  | .0  | .0   | .0    | .5    | .0    | .0  | .0  | .5   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .4    | .0  | .4   | .0  | .0   | .5    | .5    | .0    | .0  | .0  | 1.0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| TOT PCT | .0  | 3.4  | 12.4  | 3.4   | 2.3   | 1.0 | 22.5 | .0  | 4.9  | 6.1   | 1.5   | .0    | .0  | .0  | 12.5 | 98.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.9 | 3.4  | .0    | .0    | .0    | .0  | 7.3   |         |
| 1-2     | .5  | 15.0 | 9.7   | .0    | .0    | .0  | 25.2  |         |
| 3-4     | .0  | 8.7  | 15.5  | .5    | .0    | .0  | 24.8  |         |
| 5-6     | .0  | 1.9  | 11.2  | 1.0   | .0    | .0  | 14.1  |         |
| 7       | .0  | .5   | 12.1  | 3.9   | .0    | .0  | 16.5  |         |
| 8-9     | .0  | .0   | 1.5   | 3.9   | 1.5   | .0  | 6.8   |         |
| 10-11   | .0  | .0   | .0    | 1.5   | 1.0   | .0  | 3.4   |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .5    | 1.0   | .5    | .0  | 1.9   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.4 | 29.6 | 50.5  | 11.7  | 2.9   | 1.0 | 100.0 | 206     |

PERIOD: (OVER-ALL) 1949-1971

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .7  | 5.7 | 10.4 | 5.7  | 4.0  | .5   | .5    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 111   | 4        |
| 6-7          | .0  | .7  | 5.4  | 6.2  | 3.2  | 1.5  | .2    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 84    | 6        |
| 8-9          | .0  | .0  | 1.0  | 5.9  | 5.4  | 1.7  | 2.0   | 1.0 | 1.5   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 73    | 7        |
| 10-11        | .0  | .0  | .5   | .7   | 2.7  | 2.7  | 1.5   | 1.0 | 1.0   | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 42    | 9        |
| 12-13        | .0  | .0  | .2   | .0   | .2   | .7   | 1.2   | .0  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12    | 9        |
| >13          | .0  | .0  | .0   | .0   | .5   | .2   | .5    | .0  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6     | 10       |
| INDET        | 1.7 | 1.7 | 2.7  | 2.5  | 3.7  | 2.7  | 1.2   | 1.2 | .5    | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 73    | 6        |
| TOTAL        | 10  | 33  | 82   | 85   | 80   | 48   | 34    | 14  | 16    | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 405   | 8        |
| PCT          | 2.5 | 8.1 | 20.2 | 21.0 | 19.8 | 11.9 | 8.4   | 3.5 | 4.0   | .7    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1895-1973

MARCH

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |  |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |  |
| N                  | .0   | 7.8       | .0   | .0        | .0   | .0             | .0   | 8.4             | 2.4            | .0                      | 1.9         | .0                  | 1.6        | .0                   | 84.9       |  |
| NE                 | .0   | 4.5       | .0   | .0        | .0   | .0             | .0   | 5.1             | 1.3            | 1.2                     | 2.1         | .0                  | 2.1        | .0                   | 88.3       |  |
| E                  | 5.0  | .7        | 1.4  | .0        | .0   | .0             | .0   | 7.1             | 1.4            | .0                      | 1.4         | .0                  | .0         | .0                   | 90.0       |  |
| SE                 | 3.0  | 5.0       | .0   | .0        | .0   | .0             | .0   | 8.0             | 4.5            | .0                      | 5.0         | .0                  | 2.0        | .0                   | 80.6       |  |
| S                  | 2.3  | .0        | 2.3  | .0        | .0   | .0             | .0   | 4.5             | 1.7            | 2.3                     | 2.3         | .0                  | .0         | .0                   | 89.2       |  |
| SW                 | 8.6  | 2.3       | 2.3  | .0        | .0   | .0             | .0   | 13.2            | 4.6            | 1.1                     | 1.1         | .0                  | 2.3        | .0                   | 78.7       |  |
| W                  | 3.5  | 1.8       | .4   | .0        | .0   | .0             | .0   | 5.8             | 2.4            | 1.8                     | 1.8         | .0                  | .9         | .0                   | 88.2       |  |
| NW                 | .5   | 6.1       | .5   | .0        | .0   | .0             | .0   | 7.0             | 2.1            | .0                      | 1.9         | .0                  | .9         | .0                   | 88.1       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | 7.4            | .0                      | 3.7         | .0                  | 3.7        | .0                   | 85.2       |  |
| TOT PCT            | 2.2  | 4.0       | .9   | .0        | .0   | .0             | .0   | 7.1             | 2.6            | .9                      | 2.1         | .0                  | 1.5        | .0                   | 86.2       |  |
| TOT OBS:           | 820  |           |      |           |      |                |      |                 |                |                         |             |                     |            |                      |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                      |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHR<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | 1.6                | 2.7          | 1.1  | .0           | .0   | .0                   | .0   | 5.4                     | 3.3               | 1.1          | 2.7               | .0                        | .5            | .0                                    | 87.0             |
| 00009         | 3.4                | 5.3          | 1.0  | .0           | .0   | .0                   | .0   | 9.7                     | 1.0               | 1.5          | 3.4               | .0                        | 2.9           | .0                                    | 82.0             |
| 12015         | 1.8                | 3.6          | .5   | .0           | .0   | .0                   | .0   | 5.9                     | 3.6               | .5           | .5                | .0                        | 1.4           | .0                                    | 88.2             |
| 18021         | 1.7                | 3.8          | 1.3  | .0           | .0   | .0                   | .0   | 6.7                     | 2.1               | .4           | 2.1               | .0                        | .8            | .0                                    | 88.2             |
| TOT PCT       | 2.1                | 3.9          | .9   | .0           | .0   | .0                   | .0   | 7.0                     | 2.5               | .8           | 2.1               | .0                        | 1.4           | .0                                    | 86.4             |
| TOT OBS:      | 848                |              |      |              |      |                      |      |                         |                   |              |                   |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | 0-3 | WIND SPEED (KNOTS) |       |       |       |    | 48+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|-----|--------------------|-------|-------|-------|----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          |     | 4-10               | 11-21 | 22-33 | 34-47 | 00 |      |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |       |
| N        | .7  | 8.0                | 6.5   | 2.3   | .2    | .0 |      | 17.7      | 13.0     |          | 17.8       | 19.4  | 19.7  | 21.0  | 16.8  | 15.0  | 15.0  | 17.6  |
| NE       | .8  | 8.4                | 11.1  | 2.3   | .2    | .0 |      | 22.9      | 13.3     |          | 23.1       | 47.2  | 23.4  | 22.0  | 21.6  | .0    | 22.8  | 24.0  |
| E        | .5  | 4.0                | 4.4   | .4    | .0    | .0 |      | 9.4       | 11.7     |          | 8.9        | .0    | 8.5   | 11.4  | 10.6  | 10.0  | 9.4   | 8.6   |
| SE       | .5  | 2.0                | 2.1   | .4    | .0    | .0 |      | 5.0       | 11.5     |          | 4.2        | .0    | 4.0   | 3.5   | 6.0   | 10.0  | 6.0   | 5.8   |
| S        | .3  | 2.5                | 1.5   | .5    | .0    | .0 |      | 4.8       | 11.1     |          | 3.8        | .0    | 5.0   | 4.0   | 5.8   | 10.0  | 5.7   | 3.1   |
| SW       | .6  | 3.8                | 3.5   | 1.4   | .2    | .0 |      | 9.4       | 13.1     |          | 10.0       | 11.1  | 7.5   | 5.6   | 9.5   | 10.0  | 12.7  | 9.2   |
| W        | .6  | 5.0                | 4.9   | 1.9   | .3    | .0 |      | 12.6      | 13.5     |          | 11.8       | 11.1  | 13.6  | 11.1  | 13.2  | 20.0  | 11.8  | 14.1  |
| NW       | .8  | 6.3                | 5.1   | 1.8   | .3    | .0 |      | 14.2      | 12.7     |          | 16.7       | .0    | 12.8  | 15.4  | 13.2  | 25.0  | 13.5  | 14.8  |
| VAR      | .0  | .0                 | .0    | .0    | .0    | .0 |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.0 |                    |       |       |       |    |      | 4.0       | .0       |          | 3.6        | 11.1  | 5.5   | 6.1   | 3.1   | .0    | 3.1   | 2.9   |
| TOT OBS  | 180 | 805                | 788   | 220   | 25    | 0  | 2018 |           | 12.3     |          | 384        | 9     | 380   | 198   | 385   | 5     | 414   | 243   |
| TOT PCT  | 8.9 | 39.9               | 39.0  | 10.9  | 1.2   | .0 |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |  |
| N        | 3.6  | 8.9                | 4.0   | 1.2   | .0       |      | 17.7         | 13.0        | 17.8        | 20.1       | 16.7     | 15.9     |  |  |
| NE       | 3.4  | 12.7               | 5.5   | 1.2   | .0       |      | 22.9         | 13.3        | 23.7        | 22.9       | 21.3     | 23.2     |  |  |
| E        | 1.9  | 5.6                | 1.8   | .1    | .0       |      | 9.4          | 11.7        | 8.7         | 9.5        | 10.6     | 9.1      |  |  |
| SE       | 1.2  | 2.7                | .9    | .2    | .0       |      | 5.0          | 11.5        | 4.1         | 3.8        | 6.1      | 5.9      |  |  |
| S        | 1.4  | 2.4                | .7    | .1    | .0       |      | 4.8          | 11.1        | 3.8         | 4.7        | 5.9      | 4.8      |  |  |
| SW       | 2.4  | 4.3                | 2.4   | .4    | .1       |      | 9.4          | 13.1        | 10.0        | 6.8        | 9.5      | 11.4     |  |  |
| W        | 2.7  | 5.5                | 3.8   | .6    | .0       |      | 12.6         | 13.5        | 11.8        | 12.8       | 13.3     | 12.7     |  |  |
| NW       | 3.5  | 6.3                | 3.9   | .6    | .0       |      | 14.2         | 12.7        | 16.3        | 13.7       | 13.4     | 14.0     |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |  |
| CALM     | 4.0  |                    |       |       |          |      | 4.0          | .0          | 3.8         | 5.7        | 3.1      | 3.0      |  |  |
| TOT OBS  | 487  | 975                | 463   | 88    | 5        | 2018 |              | 12.3        | 393         | 578        | 390      | 657      |  |  |
| TOT PCT  | 24.1 | 48.3               | 22.9  | 4.4   | .2       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |  |

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL | MEAN CLOUD COVER |
|----------|------|------|------|-------|-------|------------------|
| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL | MEAN CLOUD COVER |
| N        | 5.1  | 3.4  | 6.4  | 3.1   | 4.5   | .0               |
| NE       | 6.4  | 2.7  | 7.0  | 3.9   | 4.4   | .2               |
| E        | 3.1  | 1.6  | 2.8  | 1.2   | 3.9   | .0               |
| SE       | .8   | 1.1  | 2.4  | 1.3   | 5.4   | .0               |
| S        | 1.2  | 1.1  | 2.2  | 1.8   | 5.0   | .0               |
| SW       | 2.3  | 2.5  | 3.5  | 2.5   | 4.8   | .0               |
| W        | 3.7  | 2.8  | 4.9  | 2.4   | 4.5   | .0               |
| NW       | 3.6  | 3.2  | 4.4  | 1.6   | 4.1   | .0               |
| VAR      | .0   | .0   | .0   | .0    | .0    | .0               |
| CALM     | 1.6  | .4   | 1.2  | .7    | 4.0   | .0               |
| TOT OBS  | 156  | 106  | 197  | 104   | 563   | 1                |
| TOT PCT  | 27.7 | 18.8 | 35.0 | 18.5  | 100.0 | .2               |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL | MEAN CLOUD COVER |
|----------|------|------|------|-------|-------|------------------|
| N        | 5.1  | 3.4  | 6.4  | 3.1   | 4.5   | .0               |
| NE       | 6.4  | 2.7  | 7.0  | 3.9   | 4.4   | .2               |
| E        | 3.1  | 1.6  | 2.8  | 1.2   | 3.9   | .0               |
| SE       | .8   | 1.1  | 2.4  | 1.3   | 5.4   | .0               |
| S        | 1.2  | 1.1  | 2.2  | 1.8   | 5.0   | .0               |
| SW       | 2.3  | 2.5  | 3.5  | 2.5   | 4.8   | .0               |
| W        | 3.7  | 2.8  | 4.9  | 2.4   | 4.5   | .0               |
| NW       | 3.6  | 3.2  | 4.4  | 1.6   | 4.1   | .0               |
| VAR      | .0   | .0   | .0   | .0    | .0    | .0               |
| CALM     | 1.6  | .4   | 1.2  | .7    | 4.0   | .0               |
| TOT OBS  | 156  | 106  | 197  | 104   | 563   | 1                |
| TOT PCT  | 27.7 | 18.8 | 35.0 | 18.5  | 100.0 | .2               |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT/NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .0  | .2  | .0  | 1.8 | 2.8  | 2.1  | .4   | .4   | .0   | .0    | 10.2    |       |
| .2  | .0  | .0  | 1.3 | 2.3  | 3.6  | 1.1  | .2   | .2   | .0    | 11.0    |       |
| .0  | .0  | .1  | .3  | .8   | 1.0  | .4   | .0   | .0   | .0    | 6.0     |       |
| .0  | .0  | .0  | .6  | 1.1  | .8   | .3   | .4   | .0   | .0    | 2.7     |       |
| .0  | .0  | .0  | .3  | 1.2  | .8   | .3   | .3   | .0   | .0    | 3.5     |       |
| .0  | .0  | .4  | .8  | 1.6  | .3   | .6   | .1   | .0   | .2    | 6.9     |       |
| .0  | .0  | .3  | 1.0 | 1.6  | 1.0  | .7   | .3   | .0   | .2    | 8.8     |       |
| .0  | .0  | .0  | .6  | 2.0  | .4   | .8   | .0   | .0   | .4    | 8.7     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .4  | .2   | .4   | .0   | .2   | .0   | .0    | 2.8     |       |
| 1   | 1   | 5   | 39  | 76   | 58   | 26   | 11   | 1    | 4     | 341     | 563   |
| .2  | .2  | .9  | 6.9 | 13.5 | 10.3 | 4.6  | 2.0  | .2   | .7    | 60.6    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NH) | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >90YD | = OR >0 |
|----------------|----------|---------|---------|-----------|---------|-----------|-----------|------------|---------|
| = OR >6500     | 1.1      | 1.1     | 1.1     | 1.1       | 1.1     | 1.1       | 1.1       | 1.1        | 1.1     |
| = OR >5000     | 3.0      | 3.0     | 3.2     | 3.2       | 3.2     | 3.2       | 3.2       | 3.2        | 3.2     |
| = OR >3500     | 6.5      | 7.2     | 7.6     | 7.6       | 7.6     | 7.6       | 7.6       | 7.6        | 7.6     |
| = OR >2000     | 13.7     | 16.5    | 17.6    | 17.8      | 17.8    | 17.8      | 17.8      | 17.8       | 17.8    |
| = OR >1000     | 24.4     | 29.7    | 31.3    | 31.5      | 31.5    | 31.5      | 31.5      | 31.5       | 31.5    |
| = OR >600      | 29.3     | 35.9    | 37.4    | 37.8      | 37.8    | 38.1      | 38.1      | 38.1       | 38.1    |
| = OR >300      | 30.1     | 36.9    | 38.5    | 38.8      | 38.8    | 39.2      | 39.2      | 39.2       | 39.2    |
| = OR >150      | 30.2     | 37.1    | 38.7    | 39.0      | 39.0    | 39.4      | 39.4      | 39.4       | 39.4    |
| = OR >0        | 30.2     | 37.1    | 38.7    | 39.0      | 39.0    | 39.4      | 39.4      | 39.4       | 39.4    |
| TOTAL          | 172      | 211     | 220     | 222       | 222     | 224       | 224       | 224        | 224     |

TOTAL NUMBER OF OBS: 563

PCT FREQ NH <5/8: 60.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5    | 6   | 7   | 8    | OBSCD | TOTAL |
|------|------|------|------|------|------|-----|-----|------|-------|-------|
| 12.4 | 12.6 | 12.1 | 11.8 | 10.1 | 10.1 | 9.6 | 6.8 | 14.3 | .2    | 603   |

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | NO PCP | .1   | *    | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | TOT %  | .1   | *    | .0  | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .0    | .2           |
| 1/2<1        | PCP    | .0   | .0   | .1  | .1  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | NO PCP | .0   | .2   | .1  | .3  | .1  | .1   | .1   | .0   | .0  | .0   | .0    | 1.0          |
|              | TOT %  | .0   | .2   | .1  | .4  | .1  | .1   | .1   | .0   | .0  | .0   | .0    | 1.1          |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .1   | .2   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .1    | .5           |
|              | TOT %  | .1   | .2   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .1    | .5           |
| 2<5          | PCP    | .0   | .0   | .0  | .0  | .1  | .2   | .0   | .0   | .0  | .0   | .0    | .4           |
|              | NO PCP | .3   | .3   | .0  | .2  | .2  | .1   | .1   | *    | .0  | .0   | .0    | 1.1          |
|              | TOT %  | .3   | .3   | .0  | .2  | .3  | .3   | .1   | *    | .0  | .0   | .0    | 1.5          |
| 5<10         | PCP    | 1.4  | .7   | .6  | .4  | .1  | .8   | .8   | .9   | .0  | .0   | .0    | 5.8          |
|              | NO PCP | 4.3  | 5.7  | 2.3 | 1.7 | .9  | 2.1  | 4.2  | 3.8  | .0  | .0   | .0    | 25.6         |
|              | TOT %  | 5.7  | 6.5  | 2.9 | 2.2 | 1.0 | 2.9  | 5.0  | 4.7  | .0  | .0   | .0    | 31.4         |
| 10+          | PCP    | .2   | .3   | .0  | .0  | .0  | .2   | .0   | .0   | .0  | .0   | .0    | .7           |
|              | NO PCP | 12.3 | 12.9 | 5.5 | 3.5 | 4.0 | 6.9  | 8.6  | 8.4  | .0  | 2.6  | .0    | 64.6         |
|              | TOT %  | 12.5 | 13.2 | 5.5 | 3.5 | 4.0 | 7.2  | 8.6  | 8.4  | .0  | 2.6  | .0    | 65.3         |
| TOT OBS      |        |      |      |     |     |     |      |      |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |      |      |      |     |      |       |              |
|              |        | 18.7 | 20.4 | 8.5 | 6.2 | 5.4 | 10.7 | 13.8 | 13.1 | .0  | 3.3  | 100.0 | 816          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .1   | *    | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | TOT %      | .1   | *    | .0  | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .0    | .2           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .1  | .0   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | 4-10       | .0   | .2   | .1  | .2  | .0  | .0   | .1   | .0   | .0  | .0   | .0    | .6           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .1   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | 22+        | .0   | .0   | .0  | .1  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .1           |
|              | TOT %      | .0   | .2   | .1  | .3  | .1  | .1   | .1   | .0   | .0  | .0   | .0    | .8           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .1    | .1           |
|              | 4-10       | .1   | .1   | .0  | .0  | .0  | *    | *    | .0   | .0  | .0   | .0    | .2           |
|              | 11-21      | .1   | .1   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .2           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .1   | .2   | .0  | .0  | .0  | *    | *    | .0   | .0  | .0   | .1    | .5           |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .1    | .1           |
|              | 4-10       | .0   | .0   | .0  | .0  | .1  | .2   | .1   | .1   | .0  | .0   | .0    | .5           |
|              | 11-21      | .1   | .2   | .0  | .1  | .1  | .2   | .1   | *    | .0  | .0   | .0    | .8           |
|              | 22+        | .1   | .1   | .0  | .0  | .0  | .1   | .0   | *    | .0  | .0   | .0    | .3           |
|              | TOT %      | .2   | .3   | .0  | .1  | .2  | .5   | .2   | .1   | .0  | .0   | .1    | 1.7          |
| 5<10         | 0-3        | .1   | .2   | .3  | .2  | .0  | .1   | .1   | .3   | .0  | .0   | .7    | 1.9          |
|              | 4-10       | 1.7  | 1.6  | 1.0 | .5  | .2  | .8   | 1.3  | 1.0  | .0  | .0   | .0    | 8.0          |
|              | 11-21      | 2.2  | 2.9  | 1.0 | .8  | .5  | 1.1  | 1.5  | 1.7  | .0  | .0   | .0    | 11.8         |
|              | 22+        | .5   | .6   | .1  | .2  | .1  | .6   | 1.1  | 1.0  | .0  | .0   | .0    | 4.1          |
|              | TOT %      | 4.4  | 5.3  | 2.4 | 1.7 | .8  | 2.7  | 4.0  | 4.0  | .0  | .7   | .0    | 25.9         |
| 10+          | 0-3        | .4   | .4   | .3  | .4  | .2  | .5   | .4   | .6   | .0  | 2.7  | .0    | 5.9          |
|              | 4-10       | 5.9  | 5.9  | 2.9 | 1.6 | 2.4 | 2.9  | 3.8  | 4.4  | .0  | .0   | .0    | 29.8         |
|              | 11-21      | 5.1  | 7.7  | 2.7 | 1.4 | 1.0 | 2.7  | 4.0  | 4.2  | .0  | .0   | .0    | 28.9         |
|              | 22+        | 1.2  | .9   | .3  | .1  | .2  | 1.0  | 1.2  | 1.5  | .0  | .0   | .0    | 6.4          |
|              | TOT %      | 12.7 | 19.0 | 6.3 | 3.5 | 3.8 | 7.0  | 9.3  | 10.7 | .0  | 2.7  | .0    | 71.0         |
| TOT OBS      |            |      |      |     |     |     |      |      |      |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |      |      |      |     |      |       |              |
|              |            | 17.5 | 20.9 | 8.7 | 5.6 | 4.9 | 10.4 | 13.6 | 14.8 | .0  | 3.6  | 100.0 | 1244         |



PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1853-1973

MARCH

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .0         | .0         | 7.1        | 15.7         | 9.3          | 2.9          | 2.1          | .7           | 1.4   | 39.3  | 60.7               | 140          |
| 06009          | .8         | .8         | .8         | 12.3       | 13.9         | 9.0          | 4.9          | 4.1          | .0           | .8    | 47.5  | 52.5               | 122          |
| 12015          | .0         | .0         | 1.8        | 4.7        | 14.8         | 10.7         | 4.1          | .6           | .0           | 1.2   | 37.9  | 62.1               | 169          |
| 18021          | .0         | .0         | 1.3        | 3.9        | 9.7          | 11.6         | 5.8          | 1.9          | .0           | .0    | 34.2  | 65.8               | 155          |
| TOT            | 1          | 1          | 6          | 39         | 79           | 60           | 26           | 12           | 1            | 5     | 230   | 356                | 586          |
| PCT            | .2         | .2         | 1.0        | 6.7        | 13.5         | 10.2         | 4.4          | 2.0          | .2           | .9    | 39.2  | 60.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | .7    | .0  | 2.6 | 20.2 | 76.4 | 267          |
| 06009          | .3   | 1.2   | .9  | 1.8 | 29.0 | 66.9 | 338          |
| 12015          | .3   | .3    | 1.0 | 2.1 | 24.4 | 71.8 | 291          |
| 18021          | .0   | 1.1   | .0  | 1.1 | 29.3 | 68.6 | 376          |
| TOT            | 2    | 11    | 6   | 23  | 333  | 897  | 1272         |
| PCT            | .2   | .9    | .5  | 1.8 | 26.2 | 70.5 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0            | .0         | 9.4         | 30.4            | 60.1              | 138          |
| 06009          | .0            | 2.7        | 17.0        | 30.4            | 52.7              | 112          |
| 12015          | .0            | 2.4        | 9.0         | 29.5            | 61.4              | 166          |
| 18021          | .0            | 1.3        | 5.9         | 28.8            | 65.4              | 153          |
| TOT            | 0             | 9          | 56          | 169             | 344               | 569          |
| PCT            | .0            | 1.6        | 9.8         | 29.7            | 60.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 70/74  | .0   | .0    | .0    | .4    | .5    | 1.1   | .2    | .2     | 13           | 2.3         |
| 63/69  | .0   | .0    | .4    | 1.1   | 3.1   | 6.8   | 9.2   | 4.3    | 138          | 24.9        |
| 60/64  | .0   | .0    | .2    | 2.9   | 12.8  | 18.4  | 19.5  | 7.7    | 341          | 61.4        |
| 55/59  | .0   | .0    | .0    | .9    | 4.1   | 3.4   | 2.3   | .5     | 63           | 11.4        |
| TOTAL  | 0    | 0     | 3     | 29    | 114   | 165   | 173   | 71     | 555          | 100.0       |
| PCT    | .0   | .0    | .5    | 5.2   | 20.5  | 29.7  | 31.2  | 12.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM |
|------|------|-----|-----|-----|------|------|------|-----|------|
| .5   | .2   | .4  | .4  | .2  | .4   | .1   | .2   | .0  | .0   |
| 1.9  | 3.5  | 2.7 | 2.5 | 1.6 | 4.4  | 5.4  | 1.8  | .0  | 1.1  |
| 11.4 | 13.9 | 3.7 | 3.1 | 3.4 | 6.4  | 8.7  | 8.0  | .0  | 2.9  |
| 2.9  | 3.2  | 1.2 | .1  | .1  | .0   | .6   | 2.6  | .0  | .5   |
| 16.6 | 20.9 | 7.9 | 6.0 | 5.3 | 11.2 | 14.9 | 12.7 | .0  | 4.5  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 72  | 67  | 65  | 61  | 57 | 55 | 54  | 61.1 | 394          |
| 06009          | 70  | 66  | 64  | 61  | 57 | 55 | 51  | 60.8 | 365          |
| 12015          | 75  | 73  | 69  | 63  | 59 | 56 | 50  | 64.7 | 377          |
| 18021          | 74  | 71  | 68  | 63  | 58 | 57 | 56  | 63.0 | 642          |
| TOT            | 75  | 70  | 67  | 62  | 57 | 55 | 50  | 62.1 | 1978         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 5.4   | 15.4  | 28.5  | 33.1  | 17.7  | 79    | 130    |      |              |
| 06009          | .0   | 2.2   | 19.4  | 27.6  | 37.3  | 13.4  | 79    | 134    |      |              |
| 12015          | .0   | 8.3   | 28.0  | 30.6  | 24.2  | 8.9   | 74    | 157    |      |              |
| 18021          | .0   | 6.8   | 20.9  | 31.8  | 29.7  | 10.8  | 76    | 148    |      |              |
| TOT            | 0    | 33    | 121   | 169   | 175   | 71    | 77    | 569    |      |              |

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | M<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .0       | .1       | .0       | .0       | 1     | .0       | .1        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .5       | .1       | 6     | .0       | .8        |
| 6                  | .0       | .0       | .0       | .3       | .8       | .5       | .0       | 12    | .0       | 1.6       |
| 5                  | .0       | .0       | .0       | .1       | 1.3      | .9       | .0       | 18    | .0       | 2.3       |
| 4                  | .0       | .0       | .1       | .5       | 1.0      | .4       | .0       | 16    | .0       | 2.1       |
| 3                  | .0       | .0       | .0       | 1.2      | 3.8      | .5       | .0       | 42    | .3       | 5.2       |
| 2                  | .0       | .0       | .3       | 2.6      | 3.8      | .3       | .0       | 53    | .3       | 6.6       |
| 1                  | .0       | .0       | .0       | 5.1      | 3.6      | .4       | .0       | 70    | .5       | 8.5       |
| 0                  | .0       | .0       | .9       | 13.0     | 3.1      | .0       | .0       | 131   | .3       | 16.7      |
| -1                 | .0       | .0       | 1.8      | 10.2     | 1.7      | .0       | .0       | 106   | .0       | 13.7      |
| -2                 | .0       | .1       | 4.1      | 8.7      | 1.0      | .0       | .0       | 108   | .3       | 13.7      |
| -3                 | .0       | .1       | 5.4      | 6.5      | .3       | .0       | .0       | 95    | .1       | 12.2      |
| -4                 | .0       | .1       | 3.4      | 2.6      | .3       | .0       | .0       | 49    | .1       | 6.2       |
| -5                 | .0       | .4       | 2.3      | .9       | .0       | .0       | .0       | 28    | .1       | 3.5       |
| -6                 | .0       | .4       | 1.3      | .5       | .0       | .0       | .0       | 17    | .0       | 2.2       |
| -7/-8              | .0       | .3       | 1.3      | .5       | .0       | .0       | .0       | 16    | .0       | 2.1       |
| -9/-10             | .0       | .1       | .0       | .1       | .0       | .0       | .0       | 2     | .0       | .3        |
| -11/-13            | .1       | .0       | .0       | .1       | .0       | .0       | .0       | 2     | .0       | .3        |
| TOTAL              | 1        | 12       | 162      | 408      | 160      | 28       | 1        | 772   | 15       | 757       |
| PCT                | .1       | 1.6      | 21.0     | 52.8     | 20.7     | 3.6      | .1       | 100.0 | 1.9      | 98.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE  |      |       |       |       |     |    | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |      |
| <1      | .3  | 1.1  | .7    | .0    | .0    | .0  | 2.1  | .3  | .6  | .0   | .0    | .0    | .0    | .0  | .0 | 1.0  |
| 1-2     | .3  | 3.5  | 1.0   | .0    | .0    | .0  | 4.8  | .1  | 4.8 | 3.2  | .0    | .0    | .0    | .0  | .0 | 8.1  |
| 3-4     | .0  | 1.4  | 1.9   | .4    | .0    | .0  | 3.7  | .0  | 2.1 | 5.4  | .0    | .0    | .0    | .0  | .0 | 7.5  |
| 5-6     | .0  | 1.1  | 3.5   | .3    | .0    | .0  | 5.0  | .0  | .8  | 4.2  | .1    | .0    | .0    | .0  | .0 | 5.1  |
| 7       | .0  | .3   | .4    | .3    | .0    | .0  | 1.0  | .0  | .4  | 1.1  | .9    | .0    | .0    | .0  | .0 | 2.4  |
| 8-9     | .0  | .0   | .0    | .6    | .0    | .0  | .6   | .0  | .0  | .4   | .6    | .0    | .0    | .0  | .0 | 1.0  |
| 10-11   | .0  | .0   | .0    | .7    | .0    | .0  | .7   | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .0 | .1   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 13-16   | .0  | .0   | .4    | .0    | .0    | .0  | .4   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| TOT PCT | .6  | 7.5  | 7.8   | 2.2   | .0    | .0  | 18.1 | .6  | 8.6 | 14.4 | 1.6   | .0    | .0    | .0  | .0 | 25.2 |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .4  | .4   | .0    | .0    | .0    | .0  | .8  | .0  | .8  | .0   | .0    | .0    | .0    | .0  | .0 | .8  |
| 1-2     | .0  | 1.0  | .4    | .0    | .0    | .0  | 1.4 | .4  | .9  | .4   | .0    | .0    | .0    | .0  | .0 | 1.6 |
| 3-4     | .0  | .3   | 1.7   | .0    | .0    | .0  | 2.0 | .0  | 1.2 | 1.7  | .0    | .0    | .0    | .0  | .0 | 3.0 |
| 5-6     | .0  | .0   | 1.6   | .8    | .0    | .0  | 2.4 | .0  | .1  | .7   | .0    | .0    | .0    | .0  | .0 | .8  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .8   | .8    | .0    | .0    | .0  | .0 | 1.5 |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .4  | 1.7  | 3.7   | .8    | .0    | .0  | 6.6 | .4  | 3.0 | 3.5  | .8    | .0    | .0    | .0  | .0 | 7.6 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | 1.0  | .0    | .0    | .0    | .0  | 1.3 | .5  | 1.0  | .0    | .0    | .0    | .0  | 1.5 |
| 1-2     | .0  | 2.1  | .4    | .0    | .0    | .0  | 2.5 | .0  | 1.2  | .0    | .0    | .0    | .0  | 1.2 |
| 3-4     | .0  | .3   | 1.1   | .4    | .0    | .0  | 1.8 | .0  | 1.9  | 1.8   | .4    | .0    | .0  | 4.1 |
| 5-6     | .0  | .3   | .6    | .0    | .0    | .0  | .9  | .0  | .1   | .7    | .5    | .0    | .0  | 1.2 |
| 7       | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .4    | .0  | .4  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 3.6  | 2.5   | .4    | .0    | .0  | 6.9 | .5  | 4.4  | 2.5   | 1.0   | .4    | .0  | 8.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .3  | 1.0  | .0    | .0    | .0    | .0  | 1.2 | .4  | 1.0  | .1    | .0    | .0    | .0  | 1.5  |           |
| 1-2     | .0  | 1.0  | .4    | .0    | .0    | .0  | 1.4 | .0  | 3.0  | .4    | .0    | .0    | .0  | 3.3  |           |
| 3-4     | .0  | .7   | 2.2   | .0    | .0    | .0  | 2.9 | .0  | .5   | 1.2   | .4    | .0    | .0  | 2.1  |           |
| 5-6     | .0  | 1.4  | 1.5   | .3    | .0    | .0  | 3.2 | .0  | 1.1  | 3.2   | .0    | .0    | .0  | 4.4  |           |
| 7       | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .0  | .1   | .0    | 1.5   | .0    | .0  | 1.6  |           |
| 8-9     | .0  | .0   | .0    | .7    | .0    | .0  | .7  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .4    | .0    | .0  | .8   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .4    | .0    | .0  | .4   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .3  | 4.4  | 4.1   | 1.0   | .0    | .0  | 9.7 | .4  | 5.7  | 5.7   | 2.3   | .0    | .0  | 14.1 | 96.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.1 | 6.8  | .8    | .0    | .0    | .0  | 13.6  |         |
| 1-2     | 1.1 | 17.4 | 6.1   | .0    | .0    | .0  | 24.6  |         |
| 3-4     | .0  | 8.3  | 17.0  | 1.5   | .0    | .0  | 26.9  |         |
| 5-6     | .0  | 4.9  | 15.9  | 1.9   | .0    | .0  | 22.7  |         |
| 7       | .0  | 1.1  | 2.7   | 3.4   | .0    | .0  | 7.2   |         |
| 8-9     | .0  | .0   | .4    | 1.9   | .0    | .0  | 2.3   |         |
| 10-11   | .0  | .0   | .4    | 1.1   | .0    | .0  | 1.5   |         |
| 12      | .0  | .0   | .0    | .0    | .4    | .0  | .4    |         |
| 13-16   | .0  | .0   | .8    | .0    | .0    | .0  | .8    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.2 | 38.6 | 43.9  | 9.8   | .4    | .0  | 100.0 | 264     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.5 | 5.1 | 11.0 | 5.5  | 1.9  | 1.1 | .4    | .0  | .2    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 127      |
| 6-7          | .0  | 1.7 | 6.1  | 8.2  | 3.4  | 1.9 | 1.3   | .0  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 110      |
| 8-9          | .0  | .0  | 2.3  | 2.3  | 5.7  | 3.0 | 1.7   | .2  | 1.3   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 78       |
| 10-11        | .0  | .0  | .8   | 1.5  | 2.5  | 1.1 | 1.3   | .6  | .8    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 41       |
| 12-13        | .0  | .0  | 1.5  | .2   | 1.3  | .8  | .6    | .2  | .2    | .0    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 24       |
| >13          | .0  | .0  | .0   | .6   | 1.1  | .4  | .0    | .2  | .4    | .0    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 14       |
| INDET        | 2.1 | 1.3 | 3.0  | 3.4  | 2.1  | .8  | 1.3   | 1.1 | 1.5   | .0    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 79       |
| TOTAL        | 17  | 38  | 117  | 103  | 85   | 43  | 31    | 11  | 24    | 1     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 473      |
| PCT          | 3.6 | 8.0 | 24.7 | 21.8 | 18.0 | 9.1 | 6.6   | 2.3 | 5.1   | .2    | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



PERIOD: (PRIMARY) 1904-1973  
(OVER-ALL) 1854-1973

APRIL

AREA 0002 MADEIRA ISLANDS  
32.0N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WND DIR  | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | 1.5                | 5.9       | .4   | .0        | .0   | .0              | .0   | 7.7                     | 2.9            | .4        | .2          | .0                  | .4         | .0              | 88.3       |
| NE       | .7                 | 2.6       | .5   | .0        | .0   | .0              | .0   | 3.9                     | 1.7            | .1        | .7          | .0                  | 1.5        | .0              | 92.0       |
| E        | 4.7                | 2.3       | .0   | .0        | .0   | .0              | .0   | 7.0                     | .0             | 3.5       | 5.8         | .0                  | .0         | .0              | 87.1       |
| SE       | 11.1               | 5.6       | .0   | .0        | .0   | .0              | .0   | 16.7                    | .0             | 2.8       | .0          | .0                  | .0         | .0              | 83.3       |
| S        | 7.9                | .0        | 5.3  | .0        | .0   | .0              | .0   | 13.2                    | .0             | .0        | .0          | .0                  | .0         | .0              | 86.8       |
| SW       | 7.2                | .0        | 2.4  | .0        | .0   | .0              | .0   | 9.0                     | .6             | .0        | .0          | .0                  | 2.4        | .0              | 87.4       |
| W        | 1.4                | 10.0      | .0   | .0        | .0   | .0              | .0   | 11.4                    | 5.4            | .0        | 5.0         | .0                  | 3.2        | .0              | 75.0       |
| NW       | .0                 | 6.0       | 2.4  | .0        | .0   | .0              | .0   | 8.4                     | 1.6            | .0        | 1.0         | .0                  | 1.0        | .0              | 87.9       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| TOT PCT  | 2.0                | 4.6       | .9   | .0        | .0   | .0              | .0   | 7.4                     | 2.1            | .4        | 1.3         | .0                  | 1.1        | .0              | 87.9       |
| TOT OBS: | 701                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)      | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|--------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|                    | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG W/<br>PCPN | FOG W/<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003              | 2.1                | 3.4          | .7   | .0           | .0   | .0                    | .0   | 6.2                     | 3.4               | .7           | .7             | .0                        | 1.4           | .0                              | 88.4             |
| 00009              | 3.0                | 5.4          | 1.5  | .0           | .0   | .0                    | .0   | 9.9                     | 3.0               | 1.0          | 2.0            | .0                        | .5            | .0                              | 84.2             |
| 12015              | .5                 | 2.4          | .9   | .0           | .0   | .0                    | .0   | 3.8                     | .9                | .5           | 1.4            | .0                        | .5            | .0                              | 92.9             |
| 18021              | 2.2                | 7.3          | .0   | .0           | .0   | .0                    | .0   | 9.5                     | 1.1               | .0           | 1.7            | .0                        | 2.2           | .0                              | 85.5             |
| TOT PCT<br>TOT OBS | 1.9<br>738         | 4.6          | .8   | .0           | .0   | .0                    | .0   | 7.3                     | 2.0               | .5           | 1.5            | .0                        | 1.1           | .0                              | 87.8             |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00   |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.0                | 9.2  | 11.3  | 2.8   | .1    | .0  | 24.4 | 12.8         | 26.2        | .0          | 25.0       | 24.6  | 24.1  | 55.0  | 21.1  | 25.6  |       |
| NE       | .8                 | 9.2  | 11.6  | 2.6   | *     | .0  | 24.3 | 12.9         | 24.7        | .0          | 23.3       | 27.7  | 23.6  | 25.0  | 24.9  | 22.3  |       |
| E        | .5                 | 3.7  | 3.1   | .4    | *     | .0  | 7.6  | 11.2         | 6.9         | .0          | 8.6        | 6.7   | 8.0   | 15.0  | 7.1   | 8.1   |       |
| SE       | .3                 | 2.0  | .9    | *     | .0    | .0  | 3.3  | 8.9          | 3.3         | .0          | 3.6        | 3.8   | 3.8   | .0    | 2.8   | 2.4   |       |
| S        | .4                 | 1.8  | .7    | *     | *     | .0  | 2.9  | 9.0          | 1.7         | .0          | 3.0        | 2.3   | 3.2   | .0    | 4.4   | 2.6   |       |
| SW       | .6                 | 3.2  | 3.1   | .8    | .1    | .0  | 7.7  | 12.3         | 8.6         | 25.0        | 7.0        | 7.2   | 8.9   | .0    | 7.6   | 6.3   |       |
| W        | .9                 | 4.6  | 4.2   | 1.5   | .2    | .0  | 11.4 | 12.8         | 9.8         | 25.0        | 11.5       | 10.9  | 11.5  | .0    | 12.0  | 13.1  |       |
| NW       | 1.1                | 6.1  | 6.1   | 1.6   | .3    | .0  | 15.2 | 12.5         | 14.9        | 50.0        | 13.7       | 14.3  | 14.3  | 5.0   | 18.0  | 15.5  |       |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0   | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |       |
| CALM     | 3.2                |      |       |       |       |     | 3.2  | .0           | 3.9         | .0          | 4.2        | 2.6   | 2.5   | .0    | 2.1   | 4.1   |       |
| TOT OBS  | 181                | 832  | 857   | 203   | 17    | 0   | 2090 |              | 12.0        | 383         | 4          | 401   | 235   | 403   | 5     | 388   | 271   |
| TOT PCT  | 8.7                | 39.8 | 41.0  | 9.7   | .8    | .0  |      | 100.0        |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |  |
| N        | 4.2  | 13.3               | 6.4   | .5    | .0       |      | 24.4         | 12.8        | 25.9        | 24.8       | 24.5     | 23.0     |  |  |
| NE       | 4.1  | 13.0               | 6.6   | .5    | .0       |      | 24.3         | 12.9        | 24.5        | 24.9       | 23.7     | 23.9     |  |  |
| E        | 1.7  | 4.5                | 1.3   | .1    | .0       |      | 7.6          | 11.2        | 6.8         | 7.9        | 8.1      | 7.5      |  |  |
| SE       | 1.3  | 1.7                | .3    | .0    | .0       |      | 3.3          | 8.9         | 3.3         | 3.7        | 3.7      | 2.6      |  |  |
| S        | 1.2  | 1.4                | .2    | .1    | *        |      | 2.9          | 9.0         | 1.7         | 2.8        | 3.2      | 3.7      |  |  |
| SW       | 2.0  | 3.7                | 1.8   | .1    | .1       |      | 7.7          | 12.3        | 8.7         | 7.1        | 8.8      | 7.1      |  |  |
| W        | 3.1  | 4.9                | 2.7   | .7    | *        |      | 11.4         | 12.8        | 9.9         | 11.3       | 11.4     | 12.4     |  |  |
| NW       | 3.9  | 6.9                | 3.7   | .6    | .0       |      | 15.2         | 12.5        | 15.2        | 13.9       | 14.2     | 17.0     |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |  |
| CALM     | 3.2  |                    |       |       |          |      | 3.2          | .0          | 3.9         | 3.6        | 2.5      | 2.9      |  |  |
| TOT OBS  | 516  | 1030               | 483   | 57    | 4        | 2090 |              | 12.0        | 387         | 636        | 408      | 659      |  |  |
| TOT PCT  | 24.7 | 49.3               | 23.1  | 2.7   | .2       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |  |

PERIOD: (PRIMAR:) 1904-1973  
(OVER-ALL) 1894-1973

APRIL

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 3.9  | 6.5 | 39.5 | 39.8               | 9.6   | .8    | .0  | 11.8  | 100.0    | 387       |
| 06009 | 3.6  | 5.2 | 41.2 | 39.6               | 9.7   | .6    | .0  | 11.8  | 100.0    | 636       |
| 12015 | 2.5  | 6.1 | 34.8 | 46.6               | 9.8   | .2    | .0  | 12.3  | 100.0    | 408       |
| 18021 | 2.9  | 4.7 | 41.7 | 39.6               | 9.7   | 1.4   | .0  | 12.0  | 100.0    | 659       |
| TOT   | 67   | 114 | 832  | 857                | 203   | 17    | .0  | 12.0  |          | 2090      |
| PCT   | 3.2  | 5.5 | 39.8 | 41.0               | 9.7   | .8    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
|          |      |      |      |               |              |                        |
| N        | 8.5  | 7.4  | 11.2 | 4.3           |              | 4.4                    |
| NE       | 6.7  | 5.4  | 10.0 | 6.0           |              | 4.9                    |
| E        | 1.0  | .9   | 1.5  | 1.1           |              | 5.0                    |
| SE       | .3   | .6   | 1.5  | .4            |              | 5.3                    |
| S        | .4   | .7   | 1.2  | .2            |              | 4.7                    |
| SW       | .9   | 1.5  | 2.0  | 1.3           |              | 4.8                    |
| W        | 2.8  | 3.3  | 2.6  | 1.1           |              | 4.0                    |
| NW       | 4.8  | 2.8  | 4.9  | 1.6           |              | 4.0                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | .2   | 1.0  | .6   | .2            |              | 4.6                    |
| TOT OBS  | 125  | 115  | 169  | 79            | 488          | 4.5                    |
| TOT PCT  | 25.6 | 23.6 | 34.6 | 16.2          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .2  | .0  | .0  | 2.3 | 3.5  | 2.4  | 1.8  | .3   | .3   | .4    | 20.2    |       |
| .2  | .0  | .2  | 2.3 | 6.0  | 3.0  | 1.7  | .6   | .1   | .0    | 14.0    |       |
| .0  | .0  | .2  | .0  | .5   | .2   | .0   | .1   | .0   | .2    | 3.4     |       |
| .0  | .0  | .0  | .0  | .2   | .2   | .0   | .4   | .0   | .1    | 1.9     |       |
| .0  | .0  | .0  | .2  | .2   | .0   | .0   | .2   | .0   | .0    | 1.9     |       |
| .0  | .0  | .0  | .2  | .7   | .4   | .2   | .0   | .0   | .0    | 4.3     |       |
| .0  | .0  | .0  | .6  | 1.1  | .4   | .0   | .2   | .0   | .0    | 7.5     |       |
| .1  | .0  | .2  | .6  | 1.5  | 1.2  | .8   | .1   | .2   | .0    | 9.5     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .0  | .2   | .0   | .2   | .0   | .0   | .0    | 1.6     |       |
| 2   | 0   | 3   | 30  | 68   | 38   | 23   | 9    | 3    | 3     | 309     | 488   |
| .4  | .0  | .6  | 6.1 | 13.9 | 7.8  | 4.7  | 1.8  | .6   | .6    | 63.3    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.0       | 1.2  | 1.2  | 1.2  | 1.2  | 1.2  | 1.2   | 1.2  |
| >5000             | 2.6       | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0   | 3.0  |
| >3500             | 6.5       | 7.7  | 7.7  | 7.7  | 7.7  | 7.7  | 7.7   | 7.7  |
| >2000             | 12.6      | 15.0 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2  | 15.2 |
| >1000             | 24.1      | 28.6 | 29.0 | 29.0 | 29.0 | 29.0 | 29.2  | 29.2 |
| >600              | 29.8      | 34.7 | 35.1 | 35.3 | 35.3 | 35.3 | 35.5  | 35.5 |
| >300              | 30.2      | 35.3 | 35.7 | 35.9 | 35.9 | 35.9 | 36.1  | 36.1 |
| >150              | 30.2      | 35.3 | 35.7 | 35.9 | 35.9 | 35.9 | 36.1  | 36.1 |
| >0                | 30.2      | 35.5 | 36.1 | 36.3 | 36.3 | 36.3 | 36.5  | 36.5 |
| TOTAL             | 149       | 175  | 178  | 179  | 179  | 179  | 180   | 180  |

TOTAL NUMBER OF OBS: 493

PCT FREQ NH <5/8: 63.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS CD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|-----|-----|------|--------|--------------|
| 6.9 | 10.9 | 19.5 | 14.3 | 11.3 | 8.0 | 8.8 | 9.0 | 11.3 | .2     | 524          |

PERIOD: (PRIMARY) 1904-1973  
(OVER-ALL) 1854-1973

APRIL

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .1   | .0  | .0   | .3    |              |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .1   | .0  | .0   | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | .1  | .1  | .0  | .0  | .0  | .0   | .0  | .0   | .3    |              |
|              | NO PCP | .2   | .1   | .1  | .0  | .0  | .0  | .4  | .1   | .0  | .0   | 1.0   |              |
|              | TOT %  | .2   | .1   | .3  | .1  | .0  | .0  | .4  | .1   | .0  | .0   | 1.3   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .1  | .0  | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | TOT %  | .0   | .1   | .0  | .0  | .0  | .1  | .0  | .0   | .0  | .0   | .3    |              |
| 2<5          | PCP    | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .6   | .2   | .0  | .0  | .0  | .0  | .1  | .2   | .0  | .0   | 1.1   |              |
|              | TOT %  | .6   | .4   | .0  | .0  | .0  | .0  | .1  | .2   | .0  | .0   | 1.3   |              |
| 5<10         | PCP    | 1.8  | .5   | .3  | .2  | .1  | .4  | .7  | .6   | .0  | .0   | 4.7   |              |
|              | NO PCP | 5.7  | 7.0  | 1.7 | .9  | .5  | 2.0 | 2.7 | 3.8  | .0  | .1   | 24.3  |              |
|              | TOT %  | 7.5  | 7.5  | 2.0 | 1.1 | .6  | 2.4 | 3.4 | 4.4  | .0  | .1   | 29.0  |              |
| 10+          | PCP    | .4   | .4   | .0  | .1  | .2  | .0  | .4  | .4   | .0  | .0   | 1.9   |              |
|              | NO PCP | 20.2 | 20.1 | 3.9 | 1.3 | 1.9 | 3.4 | 5.5 | 8.4  | .0  | 1.3  | 66.0  |              |
|              | TOT %  | 20.6 | 20.5 | 3.9 | 1.4 | 2.1 | 3.4 | 6.0 | 8.8  | .0  | 1.3  | 67.8  |              |
| TOT OBS      |        |      |      |     |     |     |     |     |      |     |      |       | 699          |
| TOT PCT      |        | 29.0 | 28.7 | 6.1 | 2.6 | 2.7 | 6.0 | 9.9 | 13.6 | .0  | 1.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .1   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .0   | .0  | .0  | .0  | .0  | .0   | .1   | .0  | .0   | .2    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .1   | .0   | .0  | .0   | .2    |              |
|              | 4-10       | .1   | .1   | .1  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .3    |              |
|              | 11-21      | .0   | .0   | .1  | .0  | .0  | .0  | .1   | .1   | .0  | .0   | .3    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .2   | .2  | .1  | .0  | .0  | .2   | .2   | .0  | .0   | .9    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .2   | .2    |              |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .1   | .0  | .0  | .0  | .1  | .0   | .0   | .0  | .0   | .2    |              |
|              | 22+        | .1   | .0   | .0  | .0  | .0  | .0  | .1   | .0   | .0  | .0   | .3    |              |
|              | TOT %      | .1   | .1   | .0  | .0  | .0  | .1  | .1   | .0   | .0  | .2   | .6    |              |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .2   | .0  | .0  | .1  | .1  | .0   | .0   | .0  | .0   | .4    |              |
|              | 11-21      | .1   | .1   | .0  | .0  | .0  | .3  | .1   | .2   | .0  | .0   | .9    |              |
|              | 22+        | .1   | .0   | .0  | .0  | .0  | .1  | .0   | .1   | .0  | .0   | .4    |              |
|              | TOT %      | .4   | .3   | .0  | .0  | .1  | .5  | .1   | .3   | .0  | .0   | 1.7   |              |
| 5<10         | 0-3        | .2   | .3   | .0  | .1  | .2  | .1  | .1   | .2   | .0  | .3   | 1.4   |              |
|              | 4-10       | 1.7  | 1.8  | .8  | .5  | .4  | 1.0 | .4   | .8   | .0  | .0   | 7.4   |              |
|              | 11-21      | 2.6  | 2.8  | .9  | .2  | .2  | .6  | 1.5  | 1.6  | .0  | .0   | 10.5  |              |
|              | 22+        | .7   | 1.1  | .1  | .0  | .0  | .2  | .5   | .9   | .0  | .0   | 3.6   |              |
|              | TOT %      | 5.2  | 6.0  | 1.8 | .8  | .8  | 2.0 | 2.5  | 3.4  | .0  | .3   | 22.8  |              |
| 10+          | 0-3        | .5   | .6   | .3  | .2  | .3  | .6  | .4   | 1.0  | .0  | 2.8  | 6.8   |              |
|              | 4-10       | 8.2  | 6.8  | 2.8 | 1.4 | 1.5 | 2.3 | 3.6  | 5.1  | .0  | .0   | 31.8  |              |
|              | 11-21      | 8.1  | 9.1  | 2.3 | .6  | .5  | 1.7 | 2.7  | 4.1  | .0  | .0   | 29.2  |              |
|              | 22+        | 1.8  | 1.7  | .2  | .0  | .0  | .3  | .9   | 1.1  | .0  | .0   | 6.0   |              |
|              | TOT %      | 18.7 | 18.3 | 5.7 | 2.2 | 2.3 | 4.9 | 7.6  | 11.3 | .0  | 2.8  | 73.8  |              |
| TOT OBS      |            |      |      |     |     |     |     |      |      |     |      |       | 1167         |
| TOT PCT      |            | 24.5 | 24.9 | 7.7 | 3.1 | 3.2 | 7.5 | 10.6 | 15.2 | .0  | 3.3  | 100.0 |              |



## APRIL

PERIOD: (PRIMARY) 1904-1973  
(OVER-ALL) 1854-1973AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .0         | .0         | 7.8        | 10.4         | 6.1          | 1.7          | 1.7          | .0           | .0    | 27.8  | 72.2               | 115          |
| 06009         | 1.6        | .0         | .8         | 7.1        | 21.4         | 6.3          | 1.6          | 1.6          | .8           | .8    | 42.9  | 57.1               | 126          |
| 12015         | .0         | .0         | .6         | 6.4        | 10.9         | 9.6          | 7.1          | 2.6          | .6           | .6    | 38.5  | 61.5               | 156          |
| 18021         | .0         | .0         | .9         | 2.7        | 11.5         | 7.1          | 7.1          | .9           | .0           | .9    | 31.0  | 69.0               | 113          |
| TOT           | 2          | 0          | 3          | 31         | 69           | 38           | 23           | 9            | 3            | 3     | 181   | 329                | 510          |
| PCT           | .4         | .0         | .6         | 6.1        | 13.5         | 7.5          | 4.5          | 1.8          | .6           | .6    | 35.5  | 64.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .8   | .8    | .4  | 3.0 | 20.8 | 74.2 | 236          |
| 06009         | .0   | 1.2   | .0  | 2.9 | 26.5 | 69.4 | 340          |
| 12015         | .0   | .4    | .4  | .4  | 23.7 | 75.3 | 283          |
| 18021         | .0   | 1.7   | 1.4 | .6  | 24.3 | 71.9 | 345          |
| TOT           | 2    | 13    | 7   | 20  | 296  | 872  | 1204         |
| PCT           | .2   | 1.1   | .6  | 1.7 | 24.1 | 72.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .0            | .9         | 11.1        | 19.4            | 69.4              | 108          |
| 06009         | 1.6           | 2.4        | 13.0        | 33.3            | 53.7              | 123          |
| 12015         | .0            | .7         | 7.3         | 31.8            | 60.9              | 151          |
| 18021         | .0            | .9         | 4.5         | 27.9            | 67.6              | 111          |
| TOT           | 2             | 6          | 44          | 141             | 308               | 493          |
| PCT           | .4            | 1.2        | 8.9         | 28.6            | 62.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .4    | .0    | .0    | .0    | .0     | 2            | .4          |
| 70/74  | .0   | .0    | .0    | .0    | 1.0   | .8    | .8    | .8     | 17           | 3.4         |
| 65/69  | .0   | .0    | .0    | 1.4   | 5.0   | 8.4   | 6.6   | 1.6    | 115          | 23.0        |
| 60/64  | .0   | .0    | .0    | 3.6   | 15.2  | 23.2  | 16.6  | 5.2    | 319          | 63.9        |
| 55/59  | .0   | .0    | .0    | .0    | 2.4   | 3.6   | 1.4   | 1.6    | 45           | 9.0         |
| 50/54  | .0   | .0    | .0    | .0    | .0    | .0    | .2    | .0     | 1            | .2          |
| TOTAL  | 0    | 0     | 0     | 27    | 118   | 180   | 128   | 46     | 499          | 100.0       |
| PCT    | .0   | .0    | .0    | 5.4   | 23.6  | 36.1  | 25.7  | 9.2    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|------|-----|------|
| .2   | .1   | .0  | .0  | .0  | .0  | .0  | .2   | .0  | .0   |
| .5   | .5   | .4  | .1  | .4  | .5  | .3  | .9   | .0  | .0   |
| 4.8  | 5.5  | 2.0 | .5  | 1.2 | 2.8 | 3.6 | 2.4  | .0  | .4   |
| 19.8 | 22.1 | 3.0 | 1.5 | .9  | 2.4 | 3.6 | 9.3  | .0  | 1.4  |
| 4.0  | 2.5  | .0  | .0  | .2  | .3  | 1.2 | 1.0  | .0  | .0   |
| .2   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   |
| 29.5 | 30.6 | 5.3 | 2.0 | 2.7 | 5.8 | 8.7 | 13.7 | .0  | 1.8  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 70  | 68  | 65  | 62  | 58 | 56 | 50  | 61.9 | 385          |
| 06009         | 77  | 69  | 66  | 62  | 58 | 55 | 51  | 61.7 | 629          |
| 12015         | 76  | 74  | 70  | 64  | 60 | 58 | 55  | 64.7 | 394          |
| 18021         | 78  | 72  | 69  | 64  | 59 | 58 | 53  | 63.9 | 639          |
| TOT           | 78  | 72  | 68  | 63  | 59 | 56 | 50  | 63.0 | 2047         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 4.6   | 14.8  | 37.0  | 31.5  | 12.0   | 78   | 108          |
| 06009         | .0   | .8    | 23.3  | 41.4  | 22.6  | 12.0   | 78   | 133          |
| 12015         | .0   | 9.8   | 27.4  | 31.1  | 23.2  | 8.5    | 74   | 164          |
| 18021         | .0   | 6.3   | 27.0  | 35.1  | 26.1  | 5.4    | 75   | 111          |
| TOT           | 0    | 29    | 122   | 185   | 131   | 49     | 76   | 516          |

APRIL

PERIOD: (PRIMARY: 1904-1973  
(OVER-ALL) 1854-1973)AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .6       | 4     | .0       | .6        |
| 9/10               | .0       | .0       | .1       | .0       | .1       | .1       | 3     | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .4       | .6       | .1       | 8     | .0       | 1.2       |
| 6                  | .0       | .0       | .0       | .1       | .6       | .1       | 6     | .0       | .9        |
| 5                  | .0       | .0       | .6       | .9       | .7       | .0       | 15    | .0       | 2.2       |
| 4                  | .0       | .0       | .6       | 1.9      | 1.0      | .0       | 24    | .0       | 3.5       |
| 3                  | .0       | .0       | .4       | 2.4      | .7       | .0       | 24    | .1       | 3.4       |
| 2                  | .0       | .3       | .9       | 3.1      | .4       | .0       | 32    | .3       | 4.4       |
| 1                  | .0       | .3       | 4.6      | 5.4      | .1       | .0       | 71    | .3       | 10.2      |
| 0                  | .0       | .9       | 8.7      | 2.9      | .1       | .0       | 86    | .7       | 11.9      |
| -1                 | .0       | 1.5      | 14.6     | 2.2      | .0       | .0       | 124   | .1       | 18.1      |
| -2                 | .0       | 2.7      | 10.9     | .9       | .1       | .0       | 99    | .0       | 14.6      |
| -3                 | .1       | 3.1      | 7.2      | .6       | .0       | .0       | 75    | .0       | 11.0      |
| -4                 | .0       | 3.8      | 2.9      | .1       | .0       | .0       | 47    | .0       | 6.9       |
| -5                 | .1       | 2.5      | 1.3      | .4       | .0       | .0       | 30    | .0       | 4.4       |
| -6                 | .1       | 1.0      | .7       | .3       | .0       | .0       | 15    | .0       | 2.2       |
| -7/-8              | .4       | .4       | .4       | .0       | .0       | .0       | 9     | .0       | 1.3       |
| -9/-10             | .3       | .1       | .3       | .0       | .0       | .0       | 5     | .0       | .7        |
| -11/-13            | .0       | .1       | .1       | .0       | .0       | .0       | 2     | .0       | .3        |
| TOTAL              | 8        |          | 370      |          | 32       |          | 679   | 11       | 668       |
| PCT                | 1.2      | 16.8     | 54.5     | 21.8     | 4.7      | 1.0      | 100.0 | 1.6      | 98.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 2.1  | .0    | .0    | .0    | .0  | 2.9  | .4  | 2.1  | .0    | .0    | .0    | .0  | 2.6  |
| 1-2     | .0  | 5.5  | 1.7   | .0    | .0    | .0  | 7.2  | .0  | 3.9  | 1.4   | .0    | .0    | .0  | 5.3  |
| 3-4     | .0  | 2.7  | 6.6   | .9    | .0    | .0  | 10.2 | .4  | 3.2  | 5.6   | .6    | .0    | .0  | 9.8  |
| 5-6     | .0  | .4   | 5.0   | .8    | .0    | .0  | 6.2  | .0  | .4   | 6.9   | .8    | .0    | .0  | 8.2  |
| 7       | .0  | .8   | 2.1   | 1.7   | .0    | .0  | 4.7  | .0  | .0   | 1.6   | 2.3   | .0    | .0  | 4.0  |
| 8-9     | .0  | .0   | .0    | .6    | .0    | .0  | .6   | .0  | .0   | .4    | .5    | .0    | .0  | .9   |
| 10-11   | .0  | .0   | .4    | 1.2   | .0    | .0  | 1.6  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .4    | .0    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 11.5 | 15.9  | 5.7   | .0    | .0  | 33.9 | .8  | 9.6  | 16.0  | 4.3   | .0    | .0  | 30.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | .8   | .0    | .0    | .0    | .0  | 1.2 | .0  | .4   | .0    | .0    | .0    | .0  | .4  |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .3   | 2.1   | .0    | .0    | .0  | 2.4 | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .9    | .0    | .0    | .0  | .9  | .0  | .0   | .4    | .0    | .0    | .0  | .4  |
| 7       | .0  | .4   | .6    | .3    | .0    | .0  | 1.3 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 1.5  | 3.7   | .3    | .0    | .0  | 5.9 | .0  | .4   | .5    | .0    | .0    | .0  | .9  |

PERIOD: (OVER-ALL) 1963-1973

APRIL

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .4  | .9   | .0    | .0    | .0    | .0  | 1.3 |
| 1-2     | .0  | .3   | .4    | .0    | .0    | .0  | .7  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | 1.1   | .0    | .0    | .0  | 1.1 |
| 5-6     | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .0  | .0   | .9    | .0    | .0    | .0  | .9  |
| 7       | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .4    | .0    | .0  | .4  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .4    | .0    | .0  | .4  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .4   | .0    | .0    | .0    | .0  | .4  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .7   | .8    | .0    | .0    | .0  | 1.5 | .4  | 1.4  | 2.0   | .8    | .0    | .0  | 4.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .3  | 1.0  | .0    | .0    | .0    | .0  | 1.3 | .6  | .7   | .0    | .0    | .0    | .0  | 1.3  |           |
| 1-2     | .0  | .4   | .4    | .0    | .0    | .0  | .8  | .4  | 1.2  | 1.7   | .0    | .0    | .0  | 3.4  |           |
| 3-4     | .0  | .4   | 2.6   | .0    | .0    | .0  | 3.0 | .0  | .8   | 3.5   | .1    | .0    | .0  | 4.4  |           |
| 5-6     | .0  | .0   | 1.5   | .0    | .0    | .0  | 1.5 | .0  | .0   | 1.4   | .0    | .0    | .0  | 1.4  |           |
| 7       | .0  | .0   | .8    | .0    | .0    | .0  | .8  | .0  | .0   | .1    | .1    | .0    | .0  | .2   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .4    | .5    | .0    | .0  | .9   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .4    | .0    | .0    | .0  | .4   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .3  | 1.8  | 5.3   | .0    | .0    | .0  | 7.4 | 1.0 | 2.8  | 7.6   | .7    | .0    | .0  | 12.0 | 97.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.7 | 9.1  | .0    | .0    | .0    | .0  | 15.9  |         |
| 1-2     | .4  | 11.5 | 5.6   | .0    | .0    | .0  | 17.5  |         |
| 3-4     | .4  | 7.1  | 21.0  | 1.6   | .0    | .0  | 30.2  |         |
| 5-6     | .0  | 1.2  | 16.7  | 1.6   | .0    | .0  | 19.4  |         |
| 7       | .0  | 1.2  | 5.6   | 4.4   | .0    | .0  | 11.1  |         |
| 8-9     | .0  | .0   | .8    | 2.0   | .0    | .0  | 2.8   |         |
| 10-11   | .0  | .0   | .8    | 1.4   | .0    | .0  | 2.4   |         |
| 12      | .0  | .0   | .0    | .4    | .0    | .0  | .4    |         |
| 13-16   | .0  | .4   | .0    | .0    | .0    | .0  | .4    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.5 | 30.4 | 50.4  | 11.5  | .0    | .0  | 100.0 | 232     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.7 | 6.6 | 10.7 | 6.8  | 2.4  | .5  | 1.0   | .0  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 127   | 4        |
| 6-7          | .0  | 1.2 | 5.8  | 8.5  | 5.3  | 2.7 | .2    | .0  | .5    | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 102   | 6        |
| 8-9          | .0  | .5  | 1.5  | 3.2  | 4.4  | 2.4 | 2.9   | .2  | .7    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 65    | 7        |
| 10-11        | .0  | .5  | .5   | 2.2  | 2.7  | 2.4 | 1.0   | 1.0 | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 44    | 7        |
| 12-13        | .0  | .0  | .5   | .0   | 1.2  | .5  | 1.0   | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 14    | 8        |
| >13          | .0  | .0  | .0   | .5   | .7   | .0  | .0    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6     | 7        |
| INDET        | 1.7 | 1.0 | 2.7  | 2.4  | 2.9  | .7  | 1.2   | .5  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 54    | 5        |
| TOTAL        | 18  | 40  | 89   | 97   | 81   | 38  | 30    | 9   | 8     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 412   | 5        |
| PCT          | 4.4 | 9.7 | 21.6 | 23.5 | 19.7 | 9.2 | 7.3   | 2.2 | 1.9   | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1894-1973  
(OVER-ALL) 1854-1973

MAY

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TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FUG WD PCPN | FUG WD PCPN PAST HR | SNOKE HAZE | SPRAY BLWG DUST | NO SIG NEA |  |
| N                  | .5   | 1.1       | .0   | .0        | .0   | .0              | .0   | 1.6             | .9             | .0                      | 1.1         | .0                  | .4         | .0              | 96.0       |  |
| NE                 | 1.3  | 1.9       | .0   | .0        | .0   | .0              | .0   | 3.2             | .4             | .0                      | 1.1         | .0                  | .2         | .4              | 94.7       |  |
| E                  | .0   | 7.1       | .0   | .0        | .0   | .0              | .0   | 7.1             | .0             | .0                      | 1.3         | .0                  | 4.3        | .0              | 87.2       |  |
| SE                 | 7.1  | 1.8       | .0   | .0        | .0   | .0              | .0   | 8.9             | .0             | 7.1                     | .0          | .0                  | .0         | .0              | 83.9       |  |
| S                  | .0   | 1.7       | .0   | .0        | .0   | .0              | .0   | 1.7             | .0             | .0                      | 5.1         | .0                  | .0         | .0              | 93.2       |  |
| SW                 | .0   | 1.5       | 2.1  | .0        | .0   | .0              | .0   | 3.6             | 2.1            | .0                      | 1.0         | .0                  | .0         | .0              | 93.3       |  |
| W                  | .0   | 3.5       | .0   | .0        | .0   | .0              | .0   | 3.5             | 2.1            | .0                      | 1.1         | .0                  | .8         | .0              | 92.6       |  |
| NW                 | 1.0  | 2.9       | 1.0  | .0        | .0   | .0              | .0   | 4.9             | 2.2            | .0                      | 1.0         | .0                  | .2         | .0              | 91.7       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 4.5                     | 4.5         | .0                  | .0         | .0              | 90.9       |  |
| TOT PCT            | .8   | 2.2       | .3   | .0        | .0   | .0              | .0   | 3.2             | 1.0            | .3                      | 1.3         | .0                  | .5         | .1              | 93.5       |  |
| TOT OBS:           | 774  |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|---------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FUG WD<br>PCPN | FUG WD<br>PCPN<br>PAST HR | SNOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO SIG<br>WEA |
| 00003         | 1.9                | 1.9          | .0   | .0           | .0   | .0                    | .0   | 3.8                     | 2.6               | .6           | 1.3            | .0                        | .0            | .6                              | 91.0          |
| 06009         | .0                 | 2.8          | .5   | .0           | .0   | .0                    | .0   | 3.3                     | .9                | .5           | .9             | .0                        | .5            | .0                              | 93.9          |
| 12015         | .5                 | 1.4          | .5   | .0           | .0   | .0                    | .0   | 2.3                     | .9                | .0           | 1.8            | .0                        | .0            | .0                              | 94.9          |
| 18021         | .9                 | 2.8          | .0   | .0           | .0   | .0                    | .0   | 3.8                     | .5                | .0           | .9             | .0                        | 1.4           | .0                              | 93.4          |
| TOT PCT       | .8                 | 2.3          | .3   | .0           | .0   | .0                    | .0   | 3.3                     | 1.1               | .3           | 1.3            | .0                        | .5            | .1                              | 93.5          |
| TOT OBS:      | 799                |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.4                | 10.5 | 10.4  | 1.3   | .0    | .0  |      | 23.7      | 11.5     |          | 24.2       | 11.1  | 23.2  | 21.8  | 23.8  | .0    | 24.7  | 24.5  |
| NE       | 1.4                | 11.6 | 14.0  | 3.0   | .1    | .0  |      | 30.2      | 12.8     |          | 31.3       | 23.3  | 31.1  | 29.3  | 30.8  | 25.0  | 29.6  | 28.3  |
| E        | .7                 | 2.8  | 1.9   | .3    | .0    | .0  |      | 5.6       | 9.9      |          | 5.6        | 11.1  | 6.2   | 4.7   | 4.8   | .0    | 5.6   | 6.7   |
| SE       | .5                 | 1.3  | .3    | .1    | .0    | .0  |      | 2.2       | 7.4      |          | 2.3        | .0    | 1.8   | 2.6   | 2.1   | .0    | 2.1   | 2.3   |
| S        | .4                 | 1.8  | .4    | .1    | .0    | .0  |      | 2.8       | 8.2      |          | 2.3        | .0    | 2.7   | 3.3   | 3.7   | .0    | 2.9   | 1.6   |
| SW       | .9                 | 3.0  | 1.9   | .6    | .0    | .0  |      | 6.4       | 10.4     |          | 6.7        | 13.9  | 5.0   | 7.9   | 6.5   | 18.8  | 6.6   | 5.6   |
| W        | 1.1                | 4.9  | 4.0   | .9    | .0    | .0  |      | 11.0      | 11.3     |          | 10.8       | 16.7  | 9.1   | 9.3   | 12.8  | 31.3  | 11.2  | 11.8  |
| NW       | 1.1                | 7.3  | 5.5   | .6    | .0    | .0  |      | 14.5      | 10.5     |          | 14.1       | 13.9  | 16.1  | 15.1  | 12.2  | 25.0  | 14.0  | 15.7  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.8                |      |       |       |       |     |      | 3.8       | .0       |          | 2.6        | .0    | 4.8   | 6.0   | 3.3   | .0    | 3.3   | 3.4   |
| TOT OBS  | 272                | 1038 | 926   | 165   | 4     | 0   | 2405 |           | 10.9     |          | 428        | 9     | 457   | 285   | 449   | 8     | 448   | 321   |
| TOT PCT  | 11.3               | 43.2 | 38.5  | 6.9   | .2    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|----|------|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |      |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 4.9                | 13.5 | 4.9   | .3    | .0 |      | 23.7      | 11.5     |          | 24.0       | 22.6  | 23.4  | 24.6  |    |
| NE       | 5.5                | 15.9 | 8.1   | .8    | .0 |      | 30.2      | 12.8     |          | 31.4       | 30.4  | 30.7  | 29.1  |    |
| E        | 2.1                | 2.6  | .9    | .1    | .0 |      | 5.6       | 9.9      |          | 5.7        | 5.6   | 4.7   | 6.1   |    |
| SE       | 1.4                | .6   | .2    | .0    | .0 |      | 2.2       | 7.4      |          | 2.3        | 2.1   | 2.0   | 2.2   |    |
| S        | 1.5                | .9   | .3    | .0    | .0 |      | 2.8       | 8.2      |          | 2.3        | 2.9   | 3.6   | 2.3   |    |
| SW       | 2.2                | 2.8  | 1.3   | .1    | .0 |      | 6.4       | 10.4     |          | 6.9        | 6.1   | 6.7   | 6.2   |    |
| W        | 3.2                | 5.1  | 2.5   | .1    | .0 |      | 11.0      | 11.3     |          | 10.9       | 9.2   | 13.1  | 11.4  |    |
| NW       | 3.9                | 8.3  | 2.1   | .1    | .0 |      | 14.5      | 10.5     |          | 14.1       | 15.7  | 12.4  | 14.7  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0 |      | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 3.8                |      |       |       |    |      | 3.8       | .0       |          | 2.5        | 5.3   | 3.3   | 3.4   |    |
| TOT OBS  | 685                | 1194 | 488   | 37    | 1  | 2405 |           | 10.9     |          | 437        | 742   | 457   | 769   |    |
| TOT PCT  | 28.5               | 49.6 | 20.3  | 1.5   | .0 |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1894-1973  
(OVER-ALL) 1854-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00603 | 2.5  | 8.5 | 43.2 | 38.4               | 7.3   | .0    | .0  | 11.0  | 100.0    | 437       |
| 06609 | 5.3  | 8.2 | 41.4 | 38.8               | 6.2   | .1    | .0  | 10.7  | 100.0    | 742       |
| 12615 | 3.3  | 6.1 | 44.4 | 37.9               | 7.9   | .1    | .0  | 11.4  | 100.0    | 437       |
| 18621 | 3.4  | 7.2 | 44.1 | 38.6               | 6.6   | .1    | .0  | 10.8  | 100.0    | 769       |
| TOT   | 91   | 181 | 1038 | 926                | 165   | 4     | 0   | 10.9  |          | 2405      |
| PCT   | 3.8  | 7.5 | 43.2 | 38.5               | 6.9   | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|--------|-----------|------------------|
| N        | 6.3  | 4.3  | 9.3  | 4.6    |           | 4.7              |
| NE       | 7.9  | 5.6  | 12.3 | 7.2    |           | 4.9              |
| E        | 1.4  | .7   | 2.1  | .8     |           | 4.7              |
| SE       | .2   | .2   | .5   | .2     |           | 5.1              |
| S        | 1.1  | 1.1  | .5   | .0     |           | 3.0              |
| SW       | 1.3  | 2.0  | .4   | 1.1    |           | 4.2              |
| W        | 3.1  | 2.9  | 5.3  | 1.2    |           | 4.5              |
| NW       | 4.2  | 2.8  | 5.1  | 1.8    |           | 4.2              |
| VAR      | .0   | .0   | .0   | .0     |           | .0               |
| CALM     | .9   | .6   | .2   | .4     |           | 3.6              |
| TOT OBS  | 124  | 95   | 168  | 82     | 469       | 4.6              |
| TOT PCT  | 26.4 | 20.3 | 35.8 | 17.5   | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM) >4/8  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NM <5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| .0  | .2  | .2  | 2.1 | 3.3  | 3.5  | 1.2  | 1.1  | .0   | .2    | 12.9            |           |
| .0  | .0  | .5  | 1.5 | 6.8  | 5.4  | 1.1  | .5   | .0   | .1    | 17.1            |           |
| .0  | .0  | .0  | .0  | .7   | 1.2  | .5   | .0   | .0   | .0    | 2.6             |           |
| .0  | .0  | .0  | .0  | .2   | .3   | .0   | .0   | .0   | .0    | .6              |           |
| .0  | .0  | .0  | .0  | .2   | .0   | .0   | .0   | .0   | .0    | 2.6             |           |
| .0  | .0  | .0  | .3  | .7   | .4   | .0   | .0   | .0   | .0    | 3.5             |           |
| .0  | .0  | .0  | .5  | 2.1  | .4   | .2   | .0   | .0   | .0    | 9.3             |           |
| .0  | .0  | .4  | .2  | 1.7  | 1.3  | .6   | .5   | .0   | .0    | 9.2             |           |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| .2  | .0  | .0  | .0  | .0   | .2   | .0   | .0   | .2   | .0    | 1.5             |           |
| 1   | 1   | 5   | 22  | 73   | 60   | 17   | 10   | 1    | 1     | 278             | 469       |
| .2  | .2  | 1.1 | 4.7 | 15.6 | 12.8 | 3.6  | 2.1  | .2   | .2    | 59.3            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NM >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500     | .4        | .4      | .4      | .4      | .4        | .4        | .4         | .4      |
| = OR >5000     | 2.1       | 2.5     | 2.5     | 2.5     | 2.5       | 2.5       | 2.5        | 2.5     |
| = OR >3500     | 5.4       | 5.8     | 5.8     | 5.8     | 5.8       | 5.8       | 5.8        | 5.8     |
| = OR >2000     | 15.4      | 18.3    | 18.7    | 18.7    | 18.7      | 18.7      | 18.7       | 18.7    |
| = OR >1000     | 29.5      | 33.5    | 34.3    | 34.3    | 34.3      | 34.3      | 34.3       | 34.3    |
| = OR >600      | 32.6      | 37.8    | 38.9    | 38.9    | 38.9      | 38.9      | 38.9       | 38.9    |
| = OR >300      | 33.7      | 38.9    | 39.9    | 39.9    | 39.9      | 39.9      | 39.9       | 39.9    |
| = OR >150      | 33.7      | 39.1    | 40.1    | 40.1    | 40.1      | 40.1      | 40.1       | 40.1    |
| = OR >0        | 33.7      | 39.1    | 40.1    | 40.3    | 40.3      | 40.3      | 40.3       | 40.3    |
| TOTAL          | 162       | 188     | 193     | 194     | 194       | 194       | 194        | 194     |

TOTAL NUMBER OF OBS: 481

PCT FREQ NM <5/8: 59.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6    | 7    | 8    | OBSCD | TOTAL OBS |
|-----|------|------|------|------|-----|------|------|------|-------|-----------|
| 7.7 | 11.9 | 15.8 | 13.8 | 10.1 | 6.1 | 10.5 | 10.3 | 13.6 | .2    | 506       |

PERIOD: (PRIMARY) 1894-1973  
(OVER-ALL) 1854-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .1   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .1           |
|              | TOT %  | .0   | .1   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .3   | .1   | .0  | .0  | .2  | .1  | .1   | .0   | .0  | .0   | .0    | .8           |
|              | TOT %  | .3   | .1   | .0  | .0  | .2  | .1  | .1   | .0   | .0  | .0   | .0    | .8           |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .1   | .1    | .1           |
|              | TOT %  | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .1   | .1    | .1           |
| 2<5          | PCP    | .0   | .0   | .0  | .1  | .0  | .1  | .0   | .1   | .0  | .0   | .4    | .4           |
|              | NO PCP | .3   | .1   | .0  | .0  | .0  | .1  | .3   | .1   | .0  | .0   | .9    | .9           |
|              | TOT %  | .3   | .1   | .0  | .1  | .0  | .3  | .3   | .3   | .0  | .0   | 1.3   | 1.3          |
| 5<10         | PCP    | .3   | .6   | .3  | .0  | .1  | .1  | .2   | .5   | .0  | .0   | 1.9   | 1.9          |
|              | NO PCP | 9.0  | 8.2  | 1.6 | .3  | 1.3 | 2.8 | 3.5  | 3.0  | .0  | 1.0  | 30.9  | 30.9         |
|              | TOT %  | 9.3  | 8.8  | 1.9 | .5  | 1.4 | 2.9 | 3.7  | 3.5  | .0  | 1.0  | 32.9  | 32.9         |
| 10+          | PCP    | .1   | .4   | .1  | *   | .0  | .0  | .3   | .1   | .0  | .0   | .9    | .9           |
|              | NO PCP | 14.4 | 21.0 | 3.1 | 1.2 | 2.2 | 3.1 | 7.9  | 9.4  | .0  | 1.7  | 63.9  | 63.9         |
|              | TOT %  | 14.4 | 21.4 | 3.2 | 1.2 | 2.2 | 3.1 | 8.1  | 9.5  | .0  | 1.7  | 64.8  | 64.8         |
| TOT OBS      |        |      |      |     |     |     |     |      |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |      |      |     |      |       |              |
|              |        | 24.2 | 30.6 | 5.0 | 1.8 | 3.8 | 6.3 | 12.2 | 13.2 | .0  | 2.8  | 100.0 | 773          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .1   | *   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .2    | .2           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .1   | *   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .2    | .2           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .2   | .1   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .2    | .2           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .1   | .0   | .0  | .0   | .1    | .1           |
|              | 22+        | .0   | .0   | .0  | .0  | .1  | *   | .0   | .0   | .0  | .0   | .2    | .2           |
|              | TOT %      | .2   | .1   | .0  | .0  | .1  | *   | .1   | .0   | .0  | .0   | .5    | .5           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .1   | .1    | .1           |
|              | 4-10       | *    | *    | .0  | .0  | .0  | .0  | .1   | .0   | .0  | .0   | .2    | .2           |
|              | 11-21      | *    | *    | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .1    | .1           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .1   | .1   | .0  | .0  | .0  | .0  | .1   | .0   | .0  | .1   | .3    | .3           |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .2  | .1   | .1   | .0  | .0   | .3    | .3           |
|              | 11-21      | .2   | .1   | .0  | .0  | .0  | .1  | .0   | .2   | .0  | .0   | .6    | .6           |
|              | 22+        | .0   | .1   | .0  | .1  | .0  | .0  | .2   | .0   | .0  | .0   | .3    | .3           |
|              | TOT %      | .2   | .2   | .0  | .1  | .0  | .2  | .2   | .3   | .0  | .0   | 1.2   | 1.2          |
| 5<10         | 0-3        | .4   | .4   | .3  | .2  | .5  | .2  | .4   | .4   | .0  | .8   | 3.6   | 3.6          |
|              | 4-10       | 2.7  | 2.4  | .6  | .1  | .2  | 1.0 | 1.0  | 1.3  | .0  | .0   | 9.3   | 9.3          |
|              | 11-21      | 3.1  | 2.9  | .4  | .1  | .2  | .6  | .9   | .8   | .0  | .0   | 8.9   | 8.9          |
|              | 22+        | .3   | 1.2  | .1  | .0  | .1  | .1  | .3   | .2   | .0  | .0   | 2.3   | 2.3          |
|              | TOT %      | 6.4  | 6.9  | 1.4 | .4  | .9  | 2.0 | 2.6  | 2.7  | .0  | .8   | 24.2  | 24.2         |
| 10+          | 0-3        | .7   | .8   | .2  | .4  | .1  | .3  | .8   | 1.0  | .0  | 1.9  | 6.2   | 6.2          |
|              | 4-10       | 8.9  | 10.1 | 2.4 | 1.2 | 1.7 | 1.9 | 3.4  | 6.3  | .0  | .0   | 36.0  | 36.0         |
|              | 11-21      | 7.4  | 11.2 | .8  | .1  | .3  | .6  | 2.4  | 4.2  | .0  | .0   | 27.1  | 27.1         |
|              | 22+        | 1.3  | 1.9  | .2  | .1  | .0  | .2  | .5   | .2   | .0  | .0   | 4.4   | 4.4          |
|              | TOT %      | 18.3 | 24.0 | 3.7 | 1.8 | 2.2 | 3.0 | 7.1  | 11.7 | .0  | 1.9  | 73.7  | 73.7         |
| TOT OBS      |            |      |      |     |     |     |     |      |      |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |      |      |     |      |       |              |
|              |            | 25.1 | 31.3 | 5.1 | 2.3 | 3.2 | 5.3 | 10.2 | 14.7 | .0  | 2.8  | 100.0 | 1242         |



PERIOD: (PRIMARY) 1894-1973  
(OVER-ALL) 1854-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>399 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+   | TOTAL       | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|---------|-------------|--------------------|--------------|
| 00003          | 1.0        | .0         | 1.9        | 2.9        | 13.3         | 15.2         | 3.8          | 1.9          | .0           | 1.0     | 41.0        | 59.0               | 105          |
| 06009          | .0         | .0         | 2.6        | 5.2        | 19.0         | 14.7         | 5.2          | 2.6          | .9           | .0      | 50.0        | 50.0               | 116          |
| 12015          | .0         | .0         | .0         | 4.0        | 14.0         | 12.7         | 3.3          | 2.0          | .0           | .0      | 36.0        | 64.0               | 150          |
| 18021          | .0         | .8         | .0         | 5.6        | 14.5         | 8.1          | 1.6          | 1.6          | .0           | .0      | 32.3        | 67.7               | 124          |
| TOT<br>PCT     | 1<br>.2    | 1<br>.2    | 5<br>1.0   | 22<br>4.4  | 75<br>15.2   | 62<br>12.5   | 17<br>3.4    | 10<br>2.0    | 1<br>.2      | 1<br>.2 | 195<br>39.4 | 300<br>60.6        | 495<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1   | 1<2     | 2<5       | 5<10        | 10+         | TOTAL<br>OBS  |
|----------------|---------|---------|---------|-----------|-------------|-------------|---------------|
| 00003          | .0      | .4      | .4      | 2.0       | 20.1        | 77.2        | 254           |
| 06009          | .3      | .6      | .0      | 1.7       | 27.3        | 70.2        | 363           |
| 12015          | .4      | .4      | .0      | 1.1       | 23.6        | 74.6        | 284           |
| 18021          | .0      | .5      | .8      | .3        | 24.9        | 74.0        | 366           |
| TOT<br>PCT     | 2<br>.2 | 6<br>.5 | 4<br>.3 | 15<br>1.2 | 306<br>24.2 | 934<br>73.7 | 1267<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | 1.0           | 3.0        | 9.1         | 34.3            | 56.6              | 99           |
| 06009          | .0            | 2.6        | 9.6         | 41.7            | 48.7              | 115          |
| 12015          | .0            | .0         | 4.8         | 32.2            | 63.0              | 146          |
| 18021          | .0            | .8         | 6.6         | 26.4            | 66.9              | 121          |
| TOT<br>PCT     | 1<br>.2       | 7<br>1.5   | 35<br>7.3   | 161<br>33.5     | 285<br>59.3       | 481<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .6    | .0    | .0    | .0    | .2     | 4            | .8          |
| 70/74  | .0   | .0    | .4    | 1.0   | 2.5   | 2.9   | 1.7   | .4     | 46           | 8.8         |
| 65/69  | .0   | .0    | .2    | 1.5   | 8.8   | 15.5  | 15.2  | 5.2    | 242          | 46.4        |
| 60/64  | .0   | .0    | .0    | .6    | 10.0  | 15.5  | 10.6  | 5.4    | 219          | 42.0        |
| 55/59  | .0   | .0    | .0    | .0    | .2    | .6    | .4    | .8     | 10           | 1.9         |
| TOTAL  | 0    | 0     | 3     | 19    | 112   | 180   | 145   | 62     | 521          | 100.0       |
| PCT    | .0   | .0    | .6    | 3.6   | 21.5  | 34.5  | 27.8  | 11.9   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM |
|------|------|-----|-----|-----|-----|------|------|-----|------|
| .1   | .3   | .0  | .0  | .0  | .0  | .4   | .0   | .0  | .0   |
| 1.2  | 3.2  | .4  | .8  | .7  | .3  | .8   | .6   | .0  | 1.0  |
| 9.1  | 14.1 | 2.8 | 1.1 | 2.7 | 3.6 | 6.5  | 4.8  | .0  | 1.5  |
| 11.2 | 13.2 | 1.5 | .2  | .3  | 1.2 | 4.7  | 8.7  | .0  | 1.0  |
| .5   | .9   | .0  | .2  | .0  | .0  | .1   | .1   | .0  | .2   |
| 22.1 | 31.7 | 4.7 | 2.3 | 3.7 | 5.3 | 12.4 | 14.2 | .0  | 3.6  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 71  | 69  | 67  | 64  | 60 | 59 | 56  | 63.5 | 437          |
| 06009          | 75  | 71  | 68  | 64  | 60 | 57 | 56  | 63.8 | 739          |
| 12015          | 76  | 75  | 73  | 67  | 63 | 60 | 55  | 67.0 | 438          |
| 18021          | 77  | 73  | 71  | 65  | 61 | 59 | 55  | 65.7 | 735          |
| TOT            | 77  | 73  | 70  | 64  | 61 | 59 | 55  | 64.9 | 2349         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.8   | 12.4  | 38.9  | 28.3  | 18.6   | 80   | 113          |
| 06009          | .0   | .7    | 19.0  | 32.4  | 33.1  | 14.8   | 79   | 142          |
| 12015          | .0   | 9.6   | 25.0  | 35.3  | 24.4  | 5.8    | 74   | 156          |
| 18021          | .0   | 4.0   | 28.6  | 34.1  | 24.6  | 8.7    | 75   | 126          |
| TOT            | 0    | 23    | 116   | 188   | 148   | 62     | 77   | 537          |

PERIOD: (PRIMARY) 1894-1973  
(OVER-ALL) 1894-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | W<br>FOG | WO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .1       | 1     | .0       | .1        |
| 9/10               | .0       | .0       | .1       | .3       | .6       | 7     | .0       | 1.0       |
| 7/8                | .0       | .0       | .0       | .7       | 1.0      | 12    | .1       | 1.5       |
| 6                  | .0       | .0       | .0       | .3       | .7       | 7     | .0       | 1.0       |
| 5                  | .0       | .1       | .1       | 2.0      | .0       | 16    | .0       | 2.2       |
| 4                  | .0       | .0       | .3       | 1.4      | .0       | 12    | .0       | 1.7       |
| 3                  | .0       | .6       | 2.0      | 2.1      | .0       | 33    | .1       | 4.5       |
| 2                  | .0       | .6       | 6.3      | 1.5      | .0       | 60    | .1       | 8.2       |
| 1                  | .0       | 2.5      | 7.7      | 1.5      | .0       | 84    | .0       | 11.7      |
| 0                  | .0       | 5.4      | 10.3     | .7       | .0       | 118   | .3       | 16.2      |
| -1                 | .1       | 11.3     | 7.8      | .4       | .0       | 141   | .1       | 19.6      |
| -2                 | .3       | 11.0     | 2.2      | .4       | .0       | 100   | .4       | 13.5      |
| -3                 | .8       | 5.9      | .3       | .1       | .0       | 51    | .0       | 7.1       |
| -4                 | 1.0      | 3.1      | .8       | .0       | .0       | 35    | .0       | 4.9       |
| -5                 | .4       | 1.8      | .6       | .0       | .0       | 20    | .0       | 2.8       |
| -6                 | .3       | .8       | .3       | .0       | .0       | 10    | .0       | 1.4       |
| -7/-8              | .1       | .6       | .0       | .0       | .0       | 5     | .0       | .7        |
| -9/-10             | .3       | .1       | .0       | .0       | .0       | 3     | .0       | .4        |
| -11/-13            | .1       | .0       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 25       | 314      | 278      | 82       | 17       | 716   | 1.3      | 98.7      |
| PCT                | 3.5      | 43.9     | 38.8     | 11.5     | 2.4      | 100.0 | 1.3      | 98.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |
| <1      | .6  | .3   | .0    | .0    | .0    | .0  | .9   | .2  | 2.3  | .8    | .0    | .0    | .0  | 3.3  |
| 1-2     | .0  | 3.0  | 1.5   | .0    | .0    | .0  | 4.5  | .0  | 3.7  | 1.8   | .0    | .0    | .0  | 5.6  |
| 3-4     | .0  | 3.1  | 3.4   | .7    | .0    | .0  | 7.1  | .0  | 2.3  | 8.9   | .9    | .0    | .0  | 12.1 |
| 5-6     | .0  | .4   | 4.6   | .3    | .0    | .0  | 5.3  | .0  | .8   | 8.0   | .9    | .0    | .0  | 9.6  |
| 7       | .0  | .0   | 1.6   | .8    | .0    | .0  | 2.4  | .0  | .0   | 1.7   | 3.2   | .0    | .0  | 4.9  |
| 8-9     | .0  | .0   | .0    | .3    | .0    | .0  | .3   | .0  | .0   | .4    | .9    | .4    | .0  | 1.6  |
| 10-11   | .0  | .0   | .0    | .4    | .0    | .0  | .4   | .0  | .0   | .0    | .6    | .0    | .0  | .6   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 6.7  | 11.1  | 2.4   | .0    | .0  | 20.8 | .2  | 9.1  | 21.6  | 6.3   | .4    | .0  | 37.5 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .3  | .4   | .0    | .0    | .0    | .0  | .7  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 1.1  | .0    | .0    | .0    | .0  | 1.1 | .0  | .8   | .0    | .0    | .0    | .0  | .8  |
| 3-4     | .0  | .7   | .6    | .0    | .0    | .0  | 1.2 | .0  | .0   | .1    | .4    | .0    | .0  | .5  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .4   | .0    | .4    | .0    | .0  | .8  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .6    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 2.6  | .6    | 1.2   | .0    | .0  | 4.7 | .0  | .8   | .1    | .4    | .0    | .0  | 1.2 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|---------|
| <1      | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .0  | .6   | .0    | .0    | .0    | .0  | .6  |         |
| 1-2     | .0  | .4   | .3    | .0    | .0    | .0  | .7  | .0  | .8   | .5    | .0    | .0    | .0  | 1.2 |         |
| 3-4     | .0  | .4   | .6    | .0    | .0    | .0  | 1.0 | .0  | 1.1  | 1.1   | .0    | .0    | .0  | 2.3 |         |
| 5-6     | .0  | .0   | .6    | .0    | .0    | .0  | .6  | .0  | .4   | .2    | .4    | .0    | .0  | 1.0 |         |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .8    | .0    | .0    | .0  | .8  |         |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .4    | .0    | .0    | .0  | .4  |         |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| TOT PCT | .0  | 1.1  | 1.4   | .0    | .0    | .0  | 2.5 | .0  | 2.9  | 3.0   | .4    | .0    | .0  | 6.2 |         |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|---------|
| <1      | .4  | .3   | .0    | .0    | .0    | .0  | .7   | 1.2 | 2.0  | .0    | .0    | .0    | .0  | 3.3  |         |
| 1-2     | .0  | 3.3  | .8    | .0    | .0    | .0  | 4.0  | .4  | 2.3  | 2.0   | .0    | .0    | .0  | 4.7  |         |
| 3-4     | .0  | .8   | 2.1   | .0    | .0    | .0  | 2.9  | .4  | 1.2  | .9    | .0    | .0    | .0  | 2.5  |         |
| 5-6     | .4  | .0   | 1.4   | .4    | .0    | .0  | 2.2  | .0  | 1.1  | 1.7   | .0    | .0    | .0  | 2.9  |         |
| 7       | .0  | .0   | 1.1   | .8    | .0    | .0  | 1.9  | .0  | .0   | .5    | .0    | .0    | .0  | .5   |         |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 13-16   | .0  | .0   | .0    | .0    | .4    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| TOT PCT | .8  | 4.3  | 5.5   | 1.1   | .4    | .0  | 12.1 | 2.0 | 6.7  | 5.1   | .0    | .0    | .0  | 13.8 | 98.9    |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.3 | 6.0  | .7    | .0    | .0    | .0  | 13.1  |         |
| 1-2     | .4  | 14.9 | 6.7   | .0    | .0    | .0  | 22.0  |         |
| 3-4     | .4  | 9.3  | 17.2  | 1.9   | .0    | .0  | 28.7  |         |
| 5-6     | .4  | 2.5  | 16.0  | 1.9   | .0    | .0  | 20.9  |         |
| 7       | .0  | .0   | 5.6   | 4.9   | .0    | .0  | 10.4  |         |
| 8-9     | .0  | .4   | .7    | 1.5   | .4    | .0  | 3.0   |         |
| 10-11   | .0  | .0   | .0    | 1.5   | .0    | .0  | 1.5   |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .4    | .0  | .4    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.5 | 33.2 | 47.0  | 11.6  | .7    | .0  | 100.0 | 268     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .7  | 7.2  | 13.0 | 5.5  | 2.4  | 1.2 | .0    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 127   | 4        |
| 6-7          | .2  | .5   | 6.0  | 7.7  | 5.8  | 2.2 | .7    | .5  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 98    | 5        |
| 8-9          | .0  | .7   | .7   | 4.3  | 4.1  | 2.4 | .7    | 1.2 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 60    | 7        |
| 10-11        | .0  | .2   | .5   | .5   | 2.9  | .5  | .5    | .5  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 23    | 7        |
| 12-13        | .0  | .0   | .7   | .5   | .7   | .2  | .0    | .0  | .7    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12    | 7        |
| >13          | .0  | .0   | .0   | .2   | .2   | .2  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3     | 7        |
| INDET        | 3.1 | 1.4  | 6.7  | 5.5  | 1.9  | 2.6 | .7    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 93    | 4        |
| TOTAL        | 17  | 42   | 115  | 101  | 75   | 39  | 11    | 11  | 5     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 416   | 5        |
| PCT          | 4.1 | 10.1 | 27.6 | 24.3 | 18.0 | 9.4 | 2.6   | 2.6 | 1.2   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1893-1973  
(OVER-ALL) 1854-1973

JUNE

AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 | NO SIG MEA |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST |            |
| N        | .0                 | 2.2       | .2   | .0        | .0   | .0              | .0   | 2.4                     | 1.6            | .0        | 1.5         | .0                  | 1.2        | .0              | 93.3       |
| NE       | .5                 | 2.4       | .8   | .0        | .0   | .0              | .0   | 3.8                     | 1.7            | .0        | .0          | .0                  | 1.2        | .0              | 93.3       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 7.1        | .0              | 92.9       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| S        | 7.2                | .0        | .0   | .0        | .0   | .0              | .0   | 7.2                     | .0             | .0        | .0          | .0                  | 2.4        | .0              | 90.4       |
| SW       | 1.1                | .0        | .0   | .0        | .0   | .0              | .0   | 1.1                     | .0             | 2.3       | 4.5         | .0                  | 3.4        | .0              | 88.6       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 1.9        | .0              | 98.1       |
| NW       | 1.2                | 3.0       | .0   | .0        | .0   | .0              | .0   | 4.2                     | 1.2            | .0        | 1.8         | .0                  | 2.4        | .0              | 90.5       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 6.7        | .0              | 93.3       |
| TOT PCT  | .6                 | 1.8       | .3   | .0        | .0   | .0              | .0   | 2.6                     | 1.2            | .1        | 1.0         | .0                  | 1.9        | .0              | 93.1       |
| TOT OBS: | 680                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 | NO SIG MEA |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST |            |
| 00003      | 1.4                | .7        | .0   | .0        | .0   | .0              | .0   | 2.1                     | 2.1            | .0        | .0          | .0                  | .0         | .0              | 95.7       |
| 06009      | 1.0                | 1.5       | .0   | .0        | .0   | .0              | .0   | 2.5                     | 1.5            | .5        | 2.0         | .0                  | 1.5        | .0              | 91.9       |
| 12015      | .0                 | 1.1       | 1.1  | .0        | .0   | .0              | .0   | 2.2                     | .5             | .0        | .0          | .0                  | 3.3        | .0              | 94.0       |
| 18021      | .0                 | 3.1       | .0   | .0        | .0   | .0              | .0   | 3.1                     | .5             | .0        | 2.6         | .0                  | 2.1        | .0              | 91.8       |
| TOT PCT    | .6                 | 1.7       | .3   | .0        | .0   | .0              | .0   | 2.5                     | 1.1            | .1        | 1.3         | .0                  | 1.8        | .0              | 93.1       |
| TOT OBS:   | 715                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 2.0                | 15.9 | 11.6  | .9    | *     | .0  |      | 30.4      | 10.5     |          | 31.1       | 41.7  | 32.5  | 27.9  | 30.2  | 25.0  | 29.8  | 30.2  |
| NE       | 1.5                | 13.7 | 14.7  | 1.5   | *     | .0  |      | 31.4      | 11.0     |          | 31.0       | 25.0  | 31.8  | 32.1  | 34.0  | 12.5  | 30.2  | 29.7  |
| E        | .9                 | 2.8  | 1.4   | .3    | .0    | .0  |      | 5.4       | 9.4      |          | 5.7        | .0    | 4.5   | 5.9   | 5.2   | 12.5  | 6.9   | 4.2   |
| SE       | .5                 | 1.4  | .2    | .0    | .0    | .0  |      | 2.2       | 6.3      |          | 2.0        | .0    | 1.4   | 1.7   | 2.7   | .0    | 2.0   | 3.8   |
| S        | .3                 | 1.3  | .5    | .1    | .0    | .0  |      | 2.2       | 8.7      |          | 3.0        | .0    | 1.8   | 2.5   | 2.1   | .0    | 2.2   | 1.8   |
| SW       | .8                 | 2.4  | 1.0   | .1    | .0    | .0  |      | 4.2       | 8.1      |          | 3.5        | 16.7  | 4.0   | 4.7   | 4.9   | 31.3  | 3.7   | 4.2   |
| W        | 1.0                | 4.9  | 1.5   | .2    | *     | .0  |      | 7.7       | 8.6      |          | 8.0        | 16.7  | 6.6   | 9.4   | 7.8   | 6.3   | 6.9   | 7.8   |
| NW       | 1.3                | 8.5  | 3.3   | *     | .0    | .0  |      | 13.1      | 8.5      |          | 13.0       | .0    | 13.8  | 12.3  | 11.2  | 12.5  | 13.5  | 15.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.3                |      |       |       |       |     |      | 3.3       | .0       |          | 2.7        | .0    | 3.8   | 3.5   | 2.0   | .0    | 4.8   | 3.0   |
| TOT OBS  | 260                | 1153 | 772   | 72    | 2     | 0   | 2259 |           | 9.8      |          | 411        | 6     | 421   | 289   | 405   | 8     | 419   | 300   |
| TOT PCT  | 11.5               | 51.0 | 34.2  | 3.2   | .1    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 7.7                | 17.5 | 5.1   | .2    | .0  |           | 30.4     | 10.5     | 31.3       | 30.6  | 30.1  | 29.9  |    |
| NE       | 6.3                | 18.1 | 6.7   | .3    | .0  |           | 31.4     | 11.0     | 30.9       | 31.9  | 33.5  | 30.0  |    |
| E        | 2.3                | 2.3  | .8    | .1    | .0  |           | 5.4      | 9.4      | 5.6        | 5.0   | 5.4   | 5.8   |    |
| SE       | 1.4                | .8   | .1    | .0    | .0  |           | 2.2      | 6.3      | 2.0        | 1.5   | 2.6   | 2.8   |    |
| S        | 1.0                | 1.0  | .2    | .0    | .0  |           | 2.2      | 8.7      | 2.9        | 2.1   | 2.1   | 2.1   |    |
| SW       | 2.0                | 2.0  | .3    | .0    | .0  |           | 4.2      | 8.1      | 3.7        | 4.3   | 5.4   | 3.9   |    |
| W        | 3.2                | 3.7  | .7    | *     | .0  |           | 7.7      | 8.6      | 8.1        | 7.7   | 7.7   | 7.3   |    |
| NW       | 5.0                | 7.2  | .9    | .0    | .0  |           | 13.1     | 8.5      | 12.8       | 13.2  | 11.3  | 14.3  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.3                |      |       |       |     |           | 3.3      | .0       | 2.6        | 3.7   | 1.9   | 4.0   |    |
| TOT OBS  | 726                | 1186 | 332   | 15    | 0   | 2259      |          | 9.8      | 417        | 710   | 413   | 719   |    |
| TOT PCT  | 32.1               | 52.5 | 14.7  | .7    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1893-1973  
(OVER-ALL) 1854-1973

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AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | 2.6  | 9.1 | 53.0 | 32.6               | 2.4   | .2    | .0  | 9.6   | 100.0    | 417       |
| 06009 | 3.7  | 9.3 | 52.7 | 30.6               | 3.8   | .0    | .0  | 9.4   | 100.0    | 710       |
| 12015 | 1.9  | 8.0 | 49.9 | 37.0               | 3.1   | .0    | .0  | 10.3  | 100.0    | 413       |
| 18021 | 4.0  | 6.8 | 49.0 | 37.0               | 3.1   | .1    | .0  | 10.1  | 100.0    | 719       |
| TOT   | 74   | 186 | 1153 | 772                | 72    | 2     | 0   | 9.8   |          | 2259      |
| PCT   | 3.3  | 8.2 | 51.0 | 34.2               | 3.2   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 13.0 | 8.2  | 11.8 | 5.4          |              | 4.2                    |
| NE       | 5.6  | 6.2  | 11.1 | 6.0          |              | 5.0                    |
| E        | 1.2  | .5   | 2.0  | .2           |              | 4.0                    |
| SE       | .9   | .0   | .8   | .3           |              | 3.8                    |
| S        | 1.5  | .3   | .3   | .5           |              | 2.5                    |
| SW       | 2.1  | 1.2  | 1.4  | .3           |              | 3.2                    |
| W        | 2.5  | 1.2  | 1.2  | 1.0          |              | 3.6                    |
| NW       | 4.0  | 1.2  | 4.8  | .5           |              | 3.9                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.6  | .5   | .3   | .3           |              | 2.4                    |
| TOT OBS  | 124  | 74   | 129  | 55           | 382          | 4.2                    |
| TOT PCT  | 32.5 | 19.4 | 33.8 | 14.4         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .2         | .8         | 2.4        | 6.7          | 2.9          | .8           | .7           | .5           | .0    | 23.5               |              |
| NE      | .3         | .0         | .0         | 1.0        | 5.8          | 3.9          | 2.6          | .9           | .3           | .0    | 14.1               |              |
| E       | .0         | .0         | .0         | .0         | .7           | .3           | .0           | .0           | .3           | .3    | 2.5                |              |
| SE      | .0         | .0         | .0         | .0         | .3           | .5           | .0           | .0           | .0           | .0    | 1.2                |              |
| S       | .0         | .0         | .0         | .3         | .3           | .0           | .0           | .0           | .0           | .0    | 2.0                |              |
| SW      | .0         | .0         | .0         | .0         | .6           | .1           | .0           | .0           | .0           | .0    | 4.4                |              |
| W       | .0         | .0         | .0         | .2         | .7           | .6           | .5           | .0           | .0           | .0    | 4.0                |              |
| NW      | .0         | .1         | .3         | .8         | 1.0          | .9           | .9           | .0           | .1           | .0    | 6.5                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .0         | .0           | .0           | .3           | .0           | .0           | .0    | 2.4                |              |
| TOT OBS | 1          | 1          | 4          | 18         | 61           | 35           | 19           | 6            | 4            | 2     | 231                | 382          |
| TOT PCT | .3         | .3         | 1.0        | 4.7        | 16.0         | 9.2          | 5.0          | 1.6          | 1.0          | .5    | 60.5               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.3       | 1.5  | 1.5  | 1.5  | 1.5  | 1.5  | 1.5   | 1.5  |
| >5000             | 2.5       | 2.8  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0   | 3.0  |
| >3500             | 7.1       | 7.6  | 7.9  | 7.9  | 7.9  | 7.9  | 7.9   | 7.9  |
| >2000             | 14.7      | 16.5 | 17.3 | 17.3 | 17.3 | 17.3 | 17.3  | 17.3 |
| >1000             | 27.9      | 32.2 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0  | 33.0 |
| >600              | 30.7      | 36.8 | 37.6 | 37.6 | 37.6 | 37.6 | 37.6  | 37.6 |
| >300              | 31.7      | 37.8 | 38.6 | 38.6 | 38.6 | 38.6 | 38.6  | 38.6 |
| >150              | 31.7      | 38.1 | 38.8 | 38.8 | 38.8 | 38.8 | 38.8  | 38.8 |
| >0                | 32.0      | 38.3 | 39.1 | 39.1 | 39.1 | 39.1 | 39.1  | 39.1 |
| TOTAL             | 126       | 151  | 154  | 154  | 154  | 154  | 154   | 154  |

TOTAL NUMBER OF OBS: 394

PCT FREQ NH <5/8: 60.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6    | 7    | 8    | OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|------|------|------|-------|--------------|
|  | 13.1 | 14.1 | 13.4 | 10.0 | 9.5 | 5.8 | 12.2 | 11.2 | 10.7 | .0    | 411          |

PERIOD: (PRIMARY) 1893-1973  
(OVER-ALL) 1894-1973

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32.5N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %  | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .2   | .0   | .0  | .0  | .0  | .1  | .1  | .2   | .0  | .0   | .7    | .7           |
|              | TOT %  | .2   | .0   | .0  | .0  | .0  | .1  | .1  | .2   | .0  | .0   | .7    | .7           |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .1  | .1  | .0  | .0   | .0  | .0   | .1    | .1           |
|              | NO PCP | .3   | .3   | .3  | .0  | .1  | .2  | .1  | .3   | .0  | .1   | 1.8   | 1.8          |
|              | TOT %  | .3   | .3   | .3  | .0  | .1  | .3  | .1  | .3   | .0  | .1   | 1.9   | 1.9          |
| 2<5          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .5   | .4   | .0  | .0  | .0  | .1  | .1  | .3   | .0  | .0   | 1.5   | 1.5          |
|              | TOT %  | .5   | .4   | .0  | .0  | .0  | .1  | .1  | .3   | .0  | .0   | 1.5   | 1.5          |
| 5<10         | PCP    | .4   | 1.0  | .0  | .0  | .1  | .0  | .0  | .2   | .0  | .0   | 1.8   | 1.8          |
|              | NO PCP | 10.2 | 10.0 | 1.8 | 1.0 | .7  | 2.1 | 4.2 | 5.5  | .0  | .6   | 35.9  | 35.9         |
|              | TOT %  | 10.6 | 11.0 | 1.8 | 1.0 | .8  | 2.1 | 4.2 | 5.7  | .0  | .6   | 37.7  | 37.7         |
| 10+          | PCP    | .4   | .1   | .0  | .0  | .0  | .0  | .0  | .3   | .0  | .0   | .7    | .7           |
|              | NO PCP | 21.9 | 15.6 | 2.1 | 1.6 | 2.1 | 3.8 | 3.3 | 5.6  | .0  | 1.5  | 57.4  | 57.4         |
|              | TOT %  | 22.2 | 15.7 | 2.1 | 1.6 | 2.1 | 3.8 | 3.3 | 5.9  | .0  | 1.5  | 58.2  | 58.2         |
| TOT OBS      |        |      |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |     |      |     |      |       |              |
|              |        | 33.9 | 27.4 | 4.1 | 2.5 | 3.1 | 6.5 | 8.0 | 12.4 | .0  | 2.2  | 100.0 | 679          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    | .1           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    | .1           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .1   | .0   | .0  | .0  | .0  | .0  | .1  | .1   | .0  | .0   | .3    | .3           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .1  | .0  | .0   | .0  | .0   | .2    | .2           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .1   | .0   | .0  | .0  | .0  | .1  | .1  | .1   | .0  | .0   | .4    | .4           |
| 1<2          | 0-3        | .0   | .0   | .1  | .0  | .0  | .0  | .1  | .0   | .0  | .1   | .3    | .3           |
|              | 4-10       | .1   | .1   | .1  | .0  | .0  | .0  | .1  | .1   | .0  | .0   | .5    | .5           |
|              | 11-21      | .1   | .0   | .0  | .0  | .0  | .1  | .0  | .0   | .0  | .0   | .3    | .3           |
|              | 22+        | .0   | .0   | .0  | .0  | .1  | .1  | .0  | .0   | .0  | .0   | .3    | .3           |
|              | TOT %      | .2   | .2   | .2  | .0  | .1  | .2  | .2  | .2   | .0  | .1   | 1.3   | 1.3          |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .3   | .2   | .0  | .0  | .0  | .1  | .2  | .0   | .0  | .0   | .8    | .8           |
|              | 11-21      | .1   | .3   | .0  | .0  | .0  | .0  | .0  | .2   | .0  | .0   | .6    | .6           |
|              | 22+        | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .2    | .2           |
|              | TOT %      | .5   | .5   | .0  | .0  | .0  | .1  | .2  | .2   | .0  | .0   | 1.6   | 1.6          |
| 5<10         | 0-3        | .5   | .3   | .0  | .1  | .0  | .0  | .2  | .1   | .0  | .5   | 1.8   | 1.8          |
|              | 4-10       | 3.8  | 3.4  | .5  | .3  | .2  | .6  | 1.9 | 2.2  | .0  | .0   | 12.8  | 12.8         |
|              | 11-21      | 2.5  | 3.2  | .6  | .2  | .3  | .7  | .4  | 1.0  | .0  | .0   | 9.0   | 9.0          |
|              | 22+        | .3   | .3   | .0  | .0  | .1  | .0  | .0  | .0   | .0  | .0   | .8    | .8           |
|              | TOT %      | 7.1  | 7.2  | 1.1 | .5  | .6  | 1.3 | 2.6 | 3.4  | .0  | .5   | 24.5  | 24.5         |
| 10+          | 0-3        | 1.3  | 1.0  | .5  | .4  | .5  | .8  | .6  | .9   | .0  | 2.0  | 7.9   | 7.9          |
|              | 4-10       | 13.9 | 10.8 | 2.0 | 1.3 | 1.4 | 2.6 | 2.4 | 6.1  | .0  | .0   | 40.5  | 40.5         |
|              | 11-21      | 8.3  | 9.5  | .5  | .0  | .6  | .7  | .6  | 1.5  | .0  | .0   | 21.7  | 21.7         |
|              | 22+        | .8   | 1.2  | .1  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | 2.1   | 2.1          |
|              | TOT %      | 24.3 | 22.5 | 3.1 | 1.7 | 2.4 | 4.1 | 3.6 | 8.5  | .0  | 2.0  | 72.2  | 72.2         |
| TOT OBS      |            |      |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |     |      |     |      |       |              |
|              |            | 32.2 | 30.5 | 4.4 | 2.3 | 3.2 | 5.8 | 6.6 | 12.4 | .0  | 2.6  | 100.0 | 1194         |



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PERIOD: (PRIMARY) 1893-1973  
(OVER-ALL) 1854-1973

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32.5N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL<br>ANY HGT | NH <5/8<br>TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|------------------|-------------------------|
| 00003          | 1.1        | .0         | 1.1        | 4.3        | 14.9         | 8.5          | 3.2          | 3.2          | .0           | 1.1   | 37.2             | 62.8                    |
| 06009          | .0         | 1.1        | 1.1        | 5.4        | 22.8         | 13.0         | 6.5          | 1.1          | 2.2          | .0    | 53.3             | 46.7                    |
| 12015          | .0         | .0         | .8         | 5.1        | 13.6         | 6.8          | 3.4          | .8           | .0           | .8    | 31.4             | 68.6                    |
| 18021          | .0         | .0         | 1.0        | 3.1        | 11.3         | 9.3          | 6.2          | 1.0          | 2.1          | .0    | 34.0             | 66.0                    |
| TOT            | 1          | 1          | 4          | 18         | 62           | 37           | 19           | 6            | 4            | 2     | 154              | 247                     |
| PCT            | .2         | .2         | 1.0        | 4.5        | 15.5         | 9.2          | 4.7          | 1.5          | 1.0          | .5    | 38.4             | 61.6                    |

TABLE 11

PERCENT FREQUENCY VS8Y (NH) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | .0    | .4  | 2.0 | 19.2 | 78.4 | 250          |
| 06009          | .3   | .8    | 1.0 | 2.4 | 29.3 | 66.2 | 382          |
| 12015          | .0   | .0    | 2.4 | .4  | 25.8 | 71.4 | 248          |
| 18021          | .0   | 1.1   | 1.1 | 1.1 | 24.6 | 71.9 | 349          |
| TOT            | 1    | 7     | 15  | 19  | 310  | 877  | 1229         |
| PCT            | .1   | .6    | 1.2 | 1.5 | 25.2 | 71.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS8Y (NH) AND/OR  
CEILING HGT (FEET, NH >4/8), BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | 1.1           | 2.2        | 9.7         | 29.0            | 61.3              | 93           |
| 06009          | .0            | 2.2        | 9.9         | 45.1            | 45.1              | 91           |
| 12015          | .0            | .9         | 7.0         | 26.3            | 66.7              | 114          |
| 18021          | .0            | 1.0        | 5.2         | 30.2            | 64.6              | 96           |
| TOT            | 1             | 6          | 31          | 127             | 236               | 394          |
| PCT            | .3            | 1.5        | 7.9         | 32.2            | 59.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .0    | .7    | 1.8   | .5    | .0     | 13           | 3.0         |
| 70/74  | .0   | .0    | .0    | .5    | 5.0   | 8.9   | 8.0   | 4.6    | 118          | 27.0        |
| 65/69  | .0   | .0    | .0    | 1.1   | 6.6   | 23.1  | 22.2  | 6.9    | 262          | 60.0        |
| 60/64  | .0   | .0    | .0    | .0    | 1.1   | 3.9   | 3.0   | 2.1    | 44           | 10.1        |
| TOTAL  | 0    | 0     | 0     | 7     | 59    | 165   | 147   | 59     | 437          | 100.0       |
| PCT    | .0   | .0    | .0    | 1.6   | 13.5  | 37.8  | 33.6  | 13.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|------|-----|------|
| 75/79 | .5   | .2   | .0  | 1.1 | .0  | .5  | .3  | .3   | .0  | .0   |
| 70/74 | 9.1  | 5.7  | .7  | .3  | .2  | 2.0 | 3.6 | 3.8  | .0  | 1.6  |
| 65/69 | 23.5 | 17.6 | 2.9 | 1.3 | 2.6 | 3.0 | 1.9 | 5.4  | .0  | 1.8  |
| 60/64 | 3.8  | 4.0  | .0  | .0  | .2  | .0  | .5  | 1.5  | .0  | .0   |
| TOTAL | 36.9 | 27.5 | 3.6 | 2.7 | 3.1 | 5.4 | 6.3 | 11.1 | .0  | 3.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 76  | 72  | 70  | 66  | 63 | 61 | 59  | 66.4 | 421          |
| 06009          | 77  | 73  | 71  | 66  | 63 | 61 | 61  | 66.6 | 704          |
| 12015          | 79  | 78  | 75  | 69  | 65 | 64 | 60  | 69.7 | 408          |
| 18021          | 82  | 77  | 75  | 69  | 64 | 63 | 57  | 69.0 | 702          |
| TOT            | 82  | 77  | 73  | 68  | 64 | 62 | 57  | 67.9 | 2235         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.0   | 6.7   | 32.4  | 44.8  | 15.2   | 81   | 105          |
| 06009          | .0   | .9    | 8.0   | 32.1  | 40.2  | 18.8   | 81   | 112          |
| 12015          | .0   | 2.4   | 21.6  | 41.6  | 24.0  | 10.4   | 76   | 125          |
| 18021          | .0   | 1.8   | 16.5  | 40.4  | 31.2  | 10.1   | 77   | 109          |
| TOT            | 0    | 7     | 61    | 166   | 156   | 61     | 79   | 451          |

PERIOD: (PRIMARY) 1893-1973  
(OVER-ALL) 1854-1973

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32.5N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WD<br>FUG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .2       | .0       | .0       | 1     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .2       | .3       | .5       | 6     | .0       | .9        |
| 7/8                | .0       | .0       | .2       | .3       | .3       | .2       | 6     | .0       | .9        |
| 6                  | .0       | .0       | .0       | .2       | .5       | .2       | 5     | .0       | .8        |
| 5                  | .0       | .0       | .2       | .9       | 1.1      | .2       | 15    | .0       | 2.3       |
| 4                  | .0       | .0       | .3       | 2.6      | 1.1      | .2       | 27    | .0       | 4.2       |
| 3                  | .0       | .0       | .5       | 2.8      | 2.3      | .0       | 36    | .5       | 5.1       |
| 2                  | .0       | .0       | 2.6      | 5.3      | .8       | .0       | 56    | .0       | 8.7       |
| 1                  | .0       | .0       | 5.1      | 5.7      | .6       | .0       | 74    | .2       | 11.3      |
| 0                  | .0       | .6       | 11.5     | 7.6      | .2       | .0       | 128   | .2       | 19.7      |
| -1                 | .0       | 2.2      | 15.3     | 3.6      | .0       | .0       | 136   | .3       | 20.7      |
| -2                 | .0       | 1.9      | 9.0      | 1.7      | .0       | .0       | 81    | .0       | 12.5      |
| -3                 | .0       | 1.7      | 2.9      | .3       | .2       | .0       | 33    | .3       | 4.8       |
| -4                 | .0       | 1.7      | 1.9      | .0       | .0       | .0       | 23    | .0       | 3.6       |
| -5                 | .0       | .5       | .8       | .2       | .0       | .0       | 9     | .0       | 1.4       |
| -6                 | .0       | .6       | .2       | .0       | .0       | .0       | 5     | .0       | .8        |
| -7/-8              | .2       | .2       | .3       | .0       | .0       | .0       | 4     | .0       | .6        |
| -11/-13            | .0       | .0       | .0       | .2       | .0       | .0       | 1     | .0       | .2        |
| TOTAL              | 1        | 60       | 327      | 204      | 47       | 7        | 646   | 9        | 637       |
| PCT                | .2       | 9.3      | 50.6     | 31.6     | 7.3      | 1.1      | 100.0 | 1.4      | 98.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | 3.0  | .0    | .0    | .0    | .0  | 3.0  | .5  | 1.0  | .0    | .0    | .0    | .0  | 1.5  |
| 1-2     | .0  | 9.6  | 2.6   | .0    | .0    | .0  | 12.2 | .5  | 4.3  | 1.7   | .0    | .0    | .0  | 6.5  |
| 3-4     | .5  | 6.5  | 7.1   | .4    | .0    | .0  | 14.5 | .0  | 2.2  | 5.4   | .6    | .0    | .0  | 8.3  |
| 5-6     | .0  | 2.2  | 2.6   | .0    | .0    | .0  | 4.8  | .0  | 1.1  | 5.7   | .0    | .0    | .0  | 6.8  |
| 7       | .0  | 1.8  | 1.0   | .5    | .0    | .0  | 3.3  | .0  | .0   | 2.0   | .0    | .0    | .0  | 2.0  |
| 8-9     | .0  | .0   | .4    | .4    | .0    | .0  | .7   | .0  | .0   | .1    | .6    | .0    | .0  | .7   |
| 10-11   | .0  | .0   | .4    | .0    | .0    | .0  | .4   | .0  | .0   | .6    | .0    | .0    | .0  | .6   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .5    | .0    | .0  | .5   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .5  | 23.2 | 14.0  | 1.2   | .0    | .0  | 38.9 | 1.0 | 8.6  | 15.5  | 1.7   | .0    | .0  | 26.8 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .9  | .0   | .0    | .0    | .0    | .0  | .9  | .1  | .5   | .0    | .0    | .0    | .0  | .6  |
| 1-2     | .0  | 2.3  | 1.0   | .0    | .0    | .0  | 3.3 | .0  | 1.6  | .1    | .0    | .0    | .0  | 1.7 |
| 3-4     | .0  | 1.0  | .5    | .0    | .0    | .0  | 1.5 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .9  | 3.3  | 1.5   | .0    | .0    | .0  | 5.7 | .1  | 2.1  | .1    | .0    | .0    | .0  | 2.3 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .5  | .9   | .0    | .0    | .0    | .0  | 1.4 | .0  | 1.6  | .0    | .0    | .0    | .0  | 1.6 |           |
| 1-2     | .0  | 2.3  | 1.4   | .0    | .0    | .0  | 3.7 | .0  | 2.0  | 1.5   | .0    | .0    | .0  | 3.4 |           |
| 3-4     | .0  | .0   | .0    | .5    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .5  | 3.2  | 1.4   | .5    | .0    | .0  | 5.5 | .0  | 3.6  | 1.5   | .0    | .0    | .0  | 5.0 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .5  | .5   | .0    | .0    | .0    | .0  | 1.0 | .0  | 1.5  | .0    | .0    | .0    | .0  | 1.5 |           |
| 1-2     | .4  | 1.0  | .5    | .0    | .0    | .0  | 1.8 | 1.1 | 3.0  | 1.1   | .0    | .0    | .0  | 5.2 |           |
| 3-4     | .0  | .0   | .5    | .0    | .0    | .0  | .5  | .0  | 1.1  | .7    | .0    | .0    | .0  | 1.8 |           |
| 5-6     | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .0  | .6   | .6    | .0    | .0    | .0  | 1.2 |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .9  | 2.0  | 1.0   | .0    | .0    | .0  | 3.8 | 1.1 | 6.3  | 2.5   | .0    | .0    | .0  | 9.9 | 98.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.9 | 9.2  | .0    | .0    | .0    | .0  | 14.1  |         |
| 1-2     | 2.4 | 25.7 | 9.7   | .0    | .0    | .0  | 37.9  |         |
| 3-4     | .5  | 10.7 | 14.1  | 1.5   | .0    | .0  | 26.7  |         |
| 5-6     | .0  | 4.4  | 8.7   | .0    | .0    | .0  | 13.1  |         |
| 7       | .0  | 1.9  | 2.9   | .5    | .0    | .0  | 5.3   |         |
| 8-9     | .0  | .0   | .5    | 1.0   | .0    | .0  | 1.5   |         |
| 10-11   | .0  | .0   | 1.0   | .0    | .0    | .0  | 1.0   |         |
| 12      | .0  | .0   | .0    | .5    | .0    | .0  | .5    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.8 | 51.9 | 36.9  | 3.4   | .0    | .0  | 100.0 | 206     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <6  | 6-7  | 8-9  | 10-11 | 12-13 | 14-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 3.4 | 10.7 | 15.4 | 5.3   | 3.8   | .9    | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 128   | 3        |
| 6-7          | .0  | 1.3  | 8.5  | 7.2   | 4.7   | .6    | .9    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 74    | 5        |
| 8-9          | .0  | .0   | 1.3  | 2.8   | 2.8   | 1.9   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 28    | 6        |
| 10-11        | .0  | 1.3  | .6   | 1.6   | .9    | .3    | .6    | .0    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 18    | 6        |
| 12-13        | .0  | .0   | .0   | .3    | .0    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2     | 7        |
| >13          | .0  | .0   | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    |          |
| INDET        | 3.1 | 4.7  | 4.1  | 6.9   | 1.3   | 1.3   | .0    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 69    | 4        |
| TOTAL        | 21  | 57   | 95   | 77    | 43    | 17    | 7     | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 319   |          |
| PCT          | 6.6 | 17.9 | 29.8 | 24.1  | 13.5  | 5.3   | 2.2   | .3    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1890-1969  
(OVER-ALL) 1855-1969

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AREA 0002 MADEIRA ISLANDS  
32.5N 16.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WQ PCPN | FGG WQ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .6                 | .6        | .0   | .0        | .0   | .0              | .0   | 1.8                     | .0             | .9        | .6          | .0                  | 1.4        | .0              | 95.9       |
| NE       | .0                 | .5        | .0   | .0        | .0   | .0              | .0   | .5                      | .5             | .0        | 1.0         | .0                  | 3.5        | .0              | 94.5       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | 3.9            | .0        | 3.9         | .0                  | 3.9        | .0              | 88.2       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | 19.0           | .0        | .0          | .0                  | .0         | .0              | 81.0       |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| W        | 2.7                | .0        | .0   | .0        | .0   | .0              | .0   | 2.7                     | .0             | .0        | .0          | .0                  | .0         | .0              | 97.3       |
| NW       | 1.3                | .0        | .0   | .0        | .0   | .0              | .0   | 1.3                     | 2.5            | 1.3       | .0          | .0                  | 1.3        | .0              | 93.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 11.8       | .0              | 88.2       |
| TOT PCT  | .4                 | .4        | .2   | .0        | .0   | .0              | .0   | 1.0                     | .8             | .4        | .8          | .0                  | 2.7        | .0              | 94.5       |
| TOT OBS: | 489                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WQ PCPN | FGG WQ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 0003       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 3.3        | .0              | 96.7       |
| 0609       | 1.5                | 1.5       | .7   | .0        | .0   | .0              | .0   | 3.7                     | 1.5            | 1.5       | .7          | .0                  | 3.0        | .0              | 90.3       |
| 1215       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .6             | .0        | .6          | .0                  | 3.7        | .0              | 95.1       |
| 1821       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .8             | .0        | 1.6         | .0                  | 1.6        | .0              | 96.1       |
| TOT PCT    | .4                 | .4        | .2   | .0        | .0   | .0              | .0   | 1.0                     | .8             | .4        | .8          | .0                  | 2.9        | .0              | 94.4       |
| TOT OBS:   | 514                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.6                | 14.9 | 11.7  | 1.4   | *     | .0  |      | 29.7      | 10.8     |          | 32.8       | 25.0  | 30.5  | 28.1  | 27.9  | 10.7  | 30.1  | 29.0  |
| NE       | 1.5                | 15.0 | 21.6  | 2.8   | *     | .0  |      | 40.9      | 12.5     |          | 37.0       | 61.1  | 42.3  | 43.7  | 42.3  | 71.4  | 41.1  | 37.8  |
| E        | .5                 | 1.9  | 2.6   | .5    | .0    | .0  |      | 5.5       | 12.3     |          | 3.9        | 11.1  | 4.1   | 7.1   | 6.1   | .0    | 5.4   | 7.2   |
| SE       | .1                 | .5   | .1    | *     | .0    | .0  |      | .7        | 7.9      |          | 1.0        | .0    | .9    | .4    | .9    | .0    | .3    | .9    |
| S        | .3                 | .6   | .1    | *     | .0    | .0  |      | 1.1       | 7.1      |          | 1.6        | .0    | .5    | 1.4   | 1.1   | .0    | 1.6   | .7    |
| SW       | .4                 | 2.2  | .3    | .0    | .0    | .0  |      | 2.9       | 6.8      |          | 3.4        | .0    | 2.0   | 1.8   | 4.0   | .0    | 3.3   | 2.7   |
| W        | .7                 | 3.7  | .9    | .0    | .0    | .0  |      | 5.3       | 7.1      |          | 6.6        | .0    | 3.8   | 5.9   | 4.4   | 14.3  | 5.0   | 6.5   |
| NW       | 1.1                | 6.2  | 2.2   | *     | .0    | .0  |      | 9.6       | 8.1      |          | 9.9        | 2.8   | 11.3  | 6.5   | 8.4   | 3.6   | 10.0  | 11.0  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.3                |      |       |       |       |     |      | 4.3       | .0       |          | 3.8        | .0    | 4.5   | 5.1   | 5.0   | .0    | 3.3   | 4.2   |
| TOT OBS  | 211                | 908  | 794   | 99    | 1     | 0   | 2013 |           | 10.5     |          | 345        | 9     | 379   | 253   | 401   | 7     | 336   | 283   |
| TOT PCT  | 10.5               | 45.1 | 39.4  | 4.9   | *     | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 7.4                | 17.1 | 5.1   | .2    | .0  |           | 29.7     | 10.8     | 32.6       | 29.5  | 27.6  | 29.6  |    |
| NE       | 6.6                | 22.7 | 11.4  | .3    | .0  |           | 40.9     | 12.5     | 37.6       | 42.9  | 42.8  | 39.6  |    |
| E        | 1.3                | 2.5  | 1.5   | .1    | .0  |           | 5.5      | 12.3     | 4.1        | 5.3   | 6.0   | 6.2   |    |
| SE       | .5                 | .1   | .1    | .0    | .0  |           | .7       | 7.9      | 1.0        | .7    | .9    | .6    |    |
| S        | .7                 | .3   | *     | .0    | .0  |           | 1.1      | 7.1      | 1.6        | .9    | 1.1   | 1.2   |    |
| SW       | 1.6                | 1.3  | *     | .0    | .0  |           | 2.9      | 6.8      | 3.3        | 1.9   | 3.9   | 3.0   |    |
| W        | 2.8                | 2.4  | .1    | .0    | .0  |           | 5.3      | 7.1      | 6.4        | 4.7   | 4.6   | 5.7   |    |
| NW       | 4.3                | 4.6  | .6    | .0    | .0  |           | 9.6      | 8.1      | 9.7        | 9.4   | 8.3   | 10.4  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 4.3                |      |       |       |     |           | 4.3      | .0       | 3.7        | 4.7   | 4.9   | 3.7   |    |
| TOT OBS  | 591                | 1029 | 380   | 13    | 0   | 2013      |          | 10.5     | 354        | 632   | 408   | 619   |    |
| TOT PCT  | 29.4               | 51.1 | 18.9  | .6    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1890-1969  
(OVER-ALL) 1855-1969

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AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| MOUR  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00003 | 3.7  | 5.4 | 48.6 | 37.3  | 5.1   | .0    | .0  | 10.4  | 100.0    | 354       |
| 06009 | 4.7  | 6.0 | 47.2 | 37.0  | 5.1   | .0    | .0  | 10.2  | 100.0    | 632       |
| 12015 | 4.9  | 8.3 | 40.9 | 41.9  | 3.9   | .0    | .0  | 10.5  | 100.0    | 408       |
| 18021 | 3.7  | 5.5 | 43.8 | 41.5  | 5.3   | .2    | .0  | 10.9  | 100.0    | 619       |
| TOT   | 86   | 125 | 908  | 794   | 99    | 1     | 0   | 10.5  |          | 2013      |
| PCT   | 4.3  | 6.2 | 45.1 | 39.4  | 4.9   | *     | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 9.7  | 9.1  | 9.1  | 5.8       |           | 4.3              |
| NE       | 12.7 | 7.7  | 12.3 | 6.1       |           | 4.3              |
| E        | 2.1  | .8   | 2.2  | 1.2       |           | 4.5              |
| SE       | .5   | .0   | .3   | .0        |           | 3.6              |
| S        | .9   | .2   | .0   | .0        |           | 1.6              |
| SW       | 1.6  | .6   | 1.0  | .0        |           | 2.9              |
| W        | 1.9  | .9   | .6   | .2        |           | 2.7              |
| NW       | 4.0  | 2.7  | 1.9  | .9        |           | 3.7              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | 2.9  | .0   | .0   | .3        |           | 1.8              |
| TOT OBS  | 112  | 68   | 85   | 45        | 310       | 4.0              |
| TOT PCT  | 36.1 | 21.9 | 27.4 | 14.5      | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .0         | .0         | 3.0        | 3.5          | 3.2          | 1.8          | .6           | .2           | .6    | 20.7               |              |
| NE      | .0         | .0         | .0         | 2.7        | 4.2          | 4.0          | 4.4          | .9           | .1           | .0    | 22.5               |              |
| E       | .0         | .0         | .0         | .2         | .6           | .5           | .7           | .0           | .3           | .4    | 4.0                |              |
| SE      | .0         | .0         | .0         | .0         | .0           | .3           | .0           | .0           | .0           | .5    |                    |              |
| S       | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | 1.0   |                    |              |
| SW      | .0         | .0         | .0         | .0         | .4           | .0           | .3           | .0           | .0           | 2.5   |                    |              |
| W       | .0         | .0         | .0         | .0         | .2           | .0           | .2           | .0           | .0           | 3.1   |                    |              |
| NW      | .0         | .0         | .3         | .2         | .5           | .6           | .9           | .0           | .0           | 7.0   |                    |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    |                    |              |
| CALM    | .0         | .0         | .0         | .0         | .3           | .0           | .0           | .0           | .0           | 2.9   |                    |              |
| TOT OBS | 0          | 0          | 1          | 18         | 29           | 26           | 26           | 7            | 1            | 3     | 199                | 310          |
| TOT PCT | .0         | .0         | .3         | 5.8        | 9.4          | 8.4          | 8.4          | 2.3          | .3           | 1.0   | 64.2               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NM >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|-------------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                   | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500        | 1.3       | 1.3     | 1.3     | 1.3     | 1.3       | 1.3       | 1.3        | 1.3     |
| = OR >5000        | 3.1       | 3.4     | 3.4     | 3.4     | 3.4       | 3.4       | 3.4        | 3.4     |
| = OR >3500        | 11.0      | 11.6    | 11.6    | 11.6    | 11.6      | 11.6      | 11.6       | 11.6    |
| = OR >2000        | 18.5      | 20.1    | 20.4    | 20.4    | 20.4      | 20.4      | 20.4       | 20.4    |
| = OR >1000        | 27.3      | 29.5    | 29.8    | 29.8    | 29.8      | 29.8      | 29.8       | 29.8    |
| = OR >600         | 32.3      | 35.4    | 35.7    | 35.7    | 35.7      | 35.7      | 35.7       | 35.7    |
| = OR >300         | 32.6      | 35.7    | 36.1    | 36.1    | 36.1      | 36.1      | 36.1       | 36.1    |
| = OR >150         | 32.6      | 35.7    | 36.1    | 36.1    | 36.1      | 36.1      | 36.1       | 36.1    |
| = OR >0           | 32.6      | 35.7    | 36.1    | 36.1    | 36.1      | 36.1      | 36.1       | 36.1    |
| TOTAL             | 104       | 114     | 115     | 115     | 115       | 115       | 115        | 115     |

TOTAL NUMBER OF OBS: 319

PCT FREQ NH <5/8: 63.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|------|-----|-----|-----|------|-------|--------------|
|  | 10.5 | 15.0 | 16.2 | 10.5 | 12.0 | 6.3 | 8.7 | 9.6 | 11.4 | .0    | 334          |

PERIOD: (PRIMARY) 1890-1969  
(OVER-ALL) 1855-1969

JULY

AREA 0002 MADEIRA ISLANDS  
32.9N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | .2   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .4    |              |
|              | TOT %  | .2   | .2   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .4    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .3   | .6   | .0  | .0 | .0  | .0  | .0  | .1  | .0  | .2   | 1.2   |              |
|              | TOT %  | .3   | .6   | .0  | .0 | .0  | .0  | .0  | .1  | .0  | .2   | 1.2   |              |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .2  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | TOT %  | .0   | .0   | .2  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
| 5<10         | PCP    | .6   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .6    |              |
|              | NO PCP | 8.8  | 12.3 | 1.2 | .0 | .2  | .9  | 1.3 | 1.6 | .0  | 1.0  | 27.4  |              |
|              | TOT %  | 9.5  | 12.3 | 1.2 | .0 | .2  | .9  | 1.3 | 1.6 | .0  | 1.0  | 28.0  |              |
| 10+          | PCP    | .0   | .2   | .0  | .0 | .0  | .1  | .1  | .0  | .0  | .0   | .4    |              |
|              | NO PCP | 23.4 | 28.4 | 3.8 | .5 | .9  | 1.8 | 2.4 | 6.2 | .0  | 2.2  | 69.7  |              |
|              | TOT %  | 23.4 | 28.6 | 3.8 | .5 | .9  | 1.8 | 2.5 | 6.3 | .0  | 2.2  | 70.1  |              |
| TOT OBS      |        |      |      |     |    |     |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |    |     |     |     |     |     |      |       |              |
|              |        | 33.3 | 41.8 | 5.2 | .5 | 1.1 | 2.8 | 3.8 | 8.0 | .0  | 3.5  | 100.0 | 489          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .1   | .1    |              |
|              | 4-10       | .1   | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | 11-21      | .1   | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .2   | .2   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .1   | .4    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .1   | .1    |              |
|              | 4-10       | .1   | .1   | .0  | .0 | .0  | .0  | .0  | .1  | .0  | .0   | .2    |              |
|              | 11-21      | .1   | .2   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .3    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .2   | .3   | .0  | .0 | .0  | .0  | .0  | .1  | .0  | .1   | .6    |              |
| 2<5          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .3   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .3    |              |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .1  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .3   | .1  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .4    |              |
| 5<10         | 0-3        | .5   | .5   | .0  | .0 | .0  | .1  | .1  | .1  | .0  | .5   | 1.6   |              |
|              | 4-10       | 2.0  | 3.0  | .6  | .0 | .1  | .5  | .5  | .9  | .0  | .0   | 7.6   |              |
|              | 11-21      | 3.6  | 5.2  | .3  | .0 | .0  | .0  | .1  | .1  | .0  | .0   | 9.3   |              |
|              | 22+        | .2   | .4   | .0  | .0 | .0  | .0  | .1  | .0  | .0  | .0   | .7    |              |
|              | TOT %      | 6.4  | 9.1  | .9  | .0 | .1  | .6  | .7  | 1.1 | .0  | .5   | 19.3  |              |
| 10+          | 0-3        | 1.1  | .8   | .4  | .2 | .1  | .5  | .5  | 1.0 | .0  | 2.8  | 7.2   |              |
|              | 4-10       | 14.7 | 13.4 | 1.7 | .6 | .9  | 1.3 | 1.8 | 4.4 | .0  | .0   | 38.7  |              |
|              | 11-21      | 9.3  | 16.8 | 1.5 | .1 | .2  | .2  | .4  | 1.7 | .0  | .0   | 30.3  |              |
|              | 22+        | 1.0  | 1.8  | .1  | .0 | .1  | .0  | .0  | .0  | .0  | .0   | 3.0   |              |
|              | TOT %      | 26.1 | 32.8 | 3.7 | .8 | 1.2 | 2.0 | 2.6 | 7.1 | .0  | 2.8  | 79.3  |              |
| TOT OBS      |            |      |      |     |    |     |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |    |     |     |     |     |     |      |       |              |
|              |            | 32.9 | 42.6 | 4.7 | .8 | 1.3 | 2.6 | 3.3 | 8.3 | .0  | 3.6  | 100.0 | 984          |



PERIOD: (PRIMARY) 1890-1969  
(OVER-ALL) 1899-1969

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AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 4000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .0         | .0         | 9.4        | 4.7          | 9.4          | 6.3          | 1.6          | .0           | 1.6   | 32.8  | 67.2               | 64           |
| 06009          | .0         | .0         | .0         | 7.5        | 16.4         | 14.9         | 6.0          | 3.0          | .0           | .0    | 47.8  | 52.2               | 67           |
| 12015          | .0         | .0         | .9         | 4.3        | 8.7          | 8.7          | 12.2         | 2.6          | .0           | 1.7   | 39.1  | 60.9               | 115          |
| 18021          | .0         | .0         | .0         | 3.6        | 7.2          | 2.4          | 4.8          | 1.2          | 1.2          | .0    | 20.5  | 79.5               | 83           |
| TOT            | 0          | 0          | 1          | 19         | 30           | 28           | 26           | 7            | 1            | 3     | 115   | 214                | 329          |
| PCT            | .0         | .0         | .3         | 5.8        | 9.1          | 8.5          | 7.9          | 2.1          | .3           | .9    | 35.0  | 65.0               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | .0    | .0  | .0  | 16.8 | 83.2 | 202          |
| 06009          | .0   | .3    | .3  | .7  | 23.5 | 75.2 | 302          |
| 12015          | .0   | .4    | 2.1 | .4  | 20.7 | 76.4 | 237          |
| 18021          | .0   | .7    | .0  | .4  | 20.4 | 78.4 | 269          |
| TOT            | 0    | 4     | 6   | 4   | 209  | 787  | 1010         |
| PCT            | .0   | .4    | .6  | .4  | 20.7 | 77.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0           | .0         | 9.8         | 24.6            | 65.6              | 61           |
| 06009          | .0           | .0         | 9.4         | 40.6            | 50.0              | 64           |
| 12015          | .0           | .9         | 5.4         | 34.8            | 59.8              | 112          |
| 18021          | .0           | .0         | 3.7         | 17.1            | 79.3              | 82           |
| TOT            | 0            | 1          | 21          | 94              | 204               | 319          |
| PCT            | .0           | .3         | 6.6         | 29.5            | 63.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | .3    | .9    | .6    | .0     | 6            | 1.7         |
| 75/79  | .0   | .0    | .0    | 1.1   | 3.7   | 3.4   | 2.0   | .0     | 36           | 10.3        |
| 70/74  | .0   | .0    | .0    | 1.4   | 12.3  | 17.4  | 23.6  | 4.6    | 208          | 59.3        |
| 65/69  | .0   | .0    | .0    | .0    | 1.4   | 11.4  | 13.1  | 2.6    | 100          | 28.5        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .3    | .0     | 1            | .3          |
| TOT    | 0    | 0     | 0     | 9     | 62    | 116   | 139   | 25     | 351          | 100.0       |
| PCT    | .0   | .0    | .0    | 2.6   | 17.7  | 33.0  | 39.6  | 7.1    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|----|-----|-----|-----|-----|------|
| .5   | .6   | .2  | .0 | .0 | .0  | .3  | .1  | .0  | .0   |
| 3.0  | 3.6  | .8  | .3 | .3 | .3  | .3  | .9  | .0  | .9   |
| 20.7 | 24.1 | 2.7 | .4 | .0 | 1.6 | 2.0 | 5.6 | .0  | 2.3  |
| 8.1  | 13.4 | 1.5 | .0 | .0 | .4  | 2.0 | 1.9 | .0  | 1.1  |
| .0   | .0   | .0  | .0 | .3 | .0  | .0  | .0  | .0  | .0   |
| 32.3 | 41.8 | 5.2 | .6 | .6 | 2.3 | 4.6 | 8.4 | .0  | 4.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 80  | 75  | 73  | 69  | 66 | 65 | 65  | 69.5 | 354          |
| 06009          | 83  | 77  | 74  | 69  | 66 | 65 | 63  | 69.5 | 633          |
| 12015          | 84  | 83  | 78  | 72  | 68 | 67 | 65  | 72.7 | 397          |
| 18021          | 84  | 80  | 77  | 71  | 68 | 66 | 59  | 71.6 | 601          |
| TOT            | 84  | 80  | 75  | 70  | 66 | 65 | 59  | 70.8 | 1985         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.5   | 10.3  | 27.9  | 48.5  | 11.8   | 79   | 68           |
| 06009          | .0   | 1.1   | 6.7   | 27.8  | 52.2  | 12.2   | 81   | 90           |
| 12015          | .0   | 3.9   | 25.0  | 36.7  | 30.5  | 3.9    | 75   | 128          |
| 18021          | .0   | 2.4   | 25.6  | 34.1  | 34.1  | 3.7    | 76   | 82           |
| TOT            | 0    | 9     | 66    | 119   | 147   | 27     | 78   | 368          |

PERIOD: (PRIMARY) 1890-1969  
(OVER-ALL) 1855-1969

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32.5N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | M<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .7       | 3     | .0       | .7        |
| 9/10               | .0       | .0       | .0       | .2       | .0       | .0       | 1     | .0       | .2        |
| 7/8                | .0       | .0       | .0       | .4       | .4       | .2       | 5     | .0       | 1.1       |
| 6                  | .0       | .0       | .2       | .7       | .9       | .0       | 8     | .2       | 1.9       |
| 5                  | .0       | .0       | .0       | 1.5      | 1.1      | .4       | 14    | .0       | 3.1       |
| 4                  | .0       | .2       | .4       | 2.8      | .9       | .0       | 20    | .0       | 4.4       |
| 3                  | .0       | .0       | 1.5      | 2.8      | .4       | .0       | 22    | .0       | 4.8       |
| 2                  | .0       | .4       | 5.7      | 5.2      | .2       | .0       | 53    | .2       | 11.3      |
| 1                  | .0       | .4       | 7.8      | 2.4      | .2       | .0       | 50    | .2       | 10.7      |
| 0                  | .0       | 3.5      | 15.3     | 1.7      | .2       | .0       | 95    | .0       | 20.7      |
| -1                 | .0       | 4.1      | 15.0     | 1.1      | .0       | .0       | 93    | .2       | 20.0      |
| -2                 | .2       | 2.8      | 3.9      | .0       | .0       | .0       | 32    | .0       | 7.0       |
| -3                 | .0       | 3.1      | 5.0      | .2       | .2       | .0       | 39    | .0       | 8.5       |
| -4                 | .0       | 1.1      | 1.3      | .0       | .0       | .0       | 11    | .0       | 2.4       |
| -5                 | .0       | .9       | .4       | .2       | .0       | .0       | 7     | .0       | 1.5       |
| -6                 | .0       | .4       | .7       | .0       | .0       | .0       | 5     | .0       | 1.1       |
| -7/-10             | .2       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .2        |
| TOTAL              | 2        | 78       | 263      | 89       | 21       | 6        | 459   | 4        | 455       |
| PCT                | .4       | 17.0     | 57.3     | 19.4     | 4.6      | 1.3      | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1969

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | .6   | .0    | .0    | .0    | .0  | 1.2  | .0  | .6   | .0    | .0    | .0    | .0  | .6   |
| 1-2     | .0  | 12.9 | 4.0   | .0    | .0    | .0  | 17.0 | .0  | 8.0  | 2.8   | .0    | .0    | .0  | 10.9 |
| 3-4     | .0  | 3.9  | 1.6   | .0    | .0    | .0  | 5.5  | .6  | 7.0  | 9.2   | .0    | .0    | .0  | 16.8 |
| 5-6     | .0  | .6   | 2.8   | .0    | .0    | .0  | 3.4  | .0  | .6   | 8.6   | 1.8   | .0    | .0  | 11.0 |
| 7       | .0  | .0   | 2.7   | .0    | .0    | .0  | 2.7  | .0  | .6   | 1.5   | .0    | .0    | .0  | 2.1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .6    | .6    | .0    | .0  | 1.2  |
| 10-11   | .0  | .0   | .0    | .6    | .0    | .0  | .6   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 18.0 | 11.2  | .6    | .0    | .0  | 30.4 | .6  | 16.8 | 22.8  | 2.4   | .0    | .0  | 42.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .6   | .0    | .0    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 1.8  | .4    | .0    | .0    | .0  | 2.2 | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .4   | 1.0   | .0    | .0    | .0  | 1.5 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | 1.0   | .0    | .0    | .0  | 1.0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .6    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .6   | .0    | .0    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 3.4  | 2.5   | .6    | .0    | .0  | 6.5 | .0  | .0   | .1    | .0    | .0    | .0  | .1  |

PERIOD: (OVER-ALL) 1963-1969

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32.5N 16.0W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .6  | .6   | .0    | .0    | .0    | .0  | 1.2 |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .6   | .0    | .0    | .0    | .0  | .6  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .6   | .0    | .0    | .0    | .0  | .6  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .6    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .0   | .0    | .6    | .0    | .0  | .6  | .6  | 1.8  | .0    | .0    | .0    | .0  | 2.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .6   | .0    | .0    | .0    | .0  | .6  | .0  | 1.8  | .0    | .0    | .0    | .0  | 1.8 |           |
| 1-2     | .0  | 2.4  | .4    | .0    | .0    | .0  | 2.8 | 1.2 | 2.2  | 1.0   | .0    | .0    | .0  | 4.5 |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .6  | .6   | 1.2   | .0    | .0    | .0  | 2.4 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .6    | .0    | .0    | .0  | .6  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .0  | 3.0  | .4    | .0    | .0    | .0  | 3.4 | 1.8 | 4.6  | 2.8   | .0    | .0    | .0  | 9.2 | 95.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.5 | 4.7  | .0    | .0    | .0    | .0  | 11.2  |         |
| 1-2     | 1.2 | 27.6 | 8.8   | .0    | .0    | .0  | 37.6  |         |
| 3-4     | 1.2 | 12.4 | 12.9  | .0    | .0    | .0  | 26.5  |         |
| 5-6     | .6  | 1.2  | 12.9  | 1.8   | .0    | .0  | 16.5  |         |
| 7       | .0  | .6   | 4.1   | .6    | .0    | .0  | 5.3   |         |
| 8-9     | .0  | .6   | .6    | 1.2   | .0    | .0  | 2.4   |         |
| 10-11   | .0  | .0   | .0    | .6    | .0    | .0  | .6    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 9.4 | 47.1 | 39.4  | 4.1   | .0    | .0  | 100.0 | 170     |

PERIOD: (OVER-ALL) 1949-1969

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .0  | 10.2 | 16.0 | 6.1  | .8   | .4  | .4    | .4 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 84    | 3        |
| 6-7          | .0  | 2.0  | 7.0  | 11.9 | 4.9  | .8  | .8    | .4 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 67    | 5        |
| 8-9          | .0  | .0   | 1.6  | 5.3  | 3.3  | .8  | .8    | .4 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 30    | 6        |
| 10-11        | .0  | .4   | .8   | 1.6  | 1.2  | .8  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12    | 5        |
| 12-13        | .0  | .0   | .8   | .8   | .4   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 5     | 5        |
| >13          | .0  | .0   | .0   | .4   | .4   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2     | 6        |
| INDET        | 3.7 | 4.5  | 3.3  | 4.1  | 1.2  | .8  | .4    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 44    | 3        |
| TOTAL        | 9   | 42   | 72   | 74   | 30   | 9   | 6     | 2  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 244   | 4        |
| PCT          | 3.7 | 17.2 | 29.5 | 30.3 | 12.3 | 3.7 | 2.5   | .8 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FUG WU PCPN | FUG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | .0   | .5        | .0   | .0        | .0   | .0              | .0   | .5              | 2.2            | .6                      | 3.5         | .0                  | 2.7        | .0              | 90.4       |  |
| NE                 | .0   | .9        | .0   | .0        | .0   | .0              | .0   | .9              | .5             | .0                      | 5.4         | .0                  | 2.9        | .0              | 90.3       |  |
| E                  | 3.0  | .0        | .0   | .0        | .0   | .0              | .0   | 3.0             | .0             | .0                      | 3.0         | .0                  | .0         | .0              | 94.0       |  |
| SE                 | 13.8 | .0        | .0   | .0        | .0   | .0              | .0   | 13.8            | .0             | .0                      | .0          | .0                  | .0         | .0              | 86.2       |  |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |  |
| SW                 | .0   | 6.3       | .0   | .0        | .0   | .0              | .0   | 6.3             | .0             | .0                      | .0          | .0                  | .0         | .0              | 93.8       |  |
| W                  | .0   | 3.6       | 3.6  | .0        | .0   | .0              | .0   | 7.3             | .0             | .0                      | .0          | .0                  | .0         | .0              | 92.7       |  |
| NW                 | .0   | .0        | 1.2  | .0        | .0   | .0              | .0   | 1.2             | .6             | .0                      | 3.7         | .0                  | 1.9        | .0              | 92.5       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | 6.7        | .0              | 93.3       |  |
| TOT PCT            | .4   | .8        | .2   | .0        | .0   | .0              | .0   | 1.3             | 1.0            | .2                      | 4.0         | .0                  | 2.5        | .0              | 91.0       |  |
| TOT OBS:           | 522  |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FUG<br>WU<br>PCPN | FUG WU<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .0                 |              | 1.1  | .0           | .0   | .0                    | .0   | 1.1                     | 1.1               | .0           | 2.2               | .0                        | 1.1           | .0                                    | 94.6             |
| 06009         | 1.4                | 2.0          | .0   | .0           | .0   | .0                    | .0   | 3.4                     | 1.4               | 1.4          | 4.1               | .0                        | 3.4           | .0                                    | 87.1             |
| 12015         | .6                 | .0           | .0   | .0           | .0   | .0                    | .0   | .6                      | .6                | .0           | 1.9               | .0                        | 2.6           | .0                                    | 94.2             |
| 18021         | .0                 | 1.4          | .0   | .0           | .0   | .0                    | .0   | 1.4                     | .7                | .0           | 8.1               | .0                        | 2.0           | .0                                    | 87.8             |
| TOT PCT       | .6                 | .9           | .2   | .0           | .0   | .0                    | .0   | 1.7                     | .9                | .4           | 4.2               | .0                        | 2.4           | .0                                    | 90.6             |
| TOT OBS:      | 544                |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    | 48+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.9                | 13.7 | 9.1   | 1.3   | .0    | .0 |      | 25.9      | 10.5     |          | 26.0       | 87.5  | 27.6  | 27.1  | 25.6  | 25.0  | 24.9  | 23.5  |
| NE       | 1.6                | 17.8 | 20.6  | 3.9   | .2    | .0 |      | 44.1      | 12.5     |          | 43.5       | 12.5  | 43.6  | 42.2  | 46.0  | 50.0  | 44.6  | 44.3  |
| E        | .4                 | 3.7  | 2.8   | .6    | .0    | .0 |      | 7.6       | 11.4     |          | 6.8        | .0    | 6.4   | 5.0   | 9.9   | .0    | 8.3   | 8.7   |
| SE       | .3                 | 1.4  | .6    | .2    | .0    | .0 |      | 2.5       | 9.8      |          | 2.7        | .0    | 1.9   | 2.7   | 3.1   | .0    | 2.2   | 2.4   |
| S        | .3                 | .7   | .2    | .0    | .0    | .0 |      | 1.2       | 5.8      |          | 1.1        | .0    | .4    | 1.7   | 1.0   | .0    | 1.9   | 1.4   |
| SW       | .4                 | 1.1  | .5    | .0    | .0    | .0 |      | 2.1       | 7.2      |          | 1.9        | .0    | 1.5   | 2.4   | 1.3   | .0    | 2.7   | 3.1   |
| W        | .8                 | 2.5  | .5    | .2    | .0    | .0 |      | 4.0       | 7.6      |          | 3.7        | .0    | 3.5   | 5.1   | 4.0   | .0    | 3.9   | 4.5   |
| NW       | .8                 | 5.7  | 2.1   | .1    | .0    | .0 |      | 8.7       | 8.3      |          | 9.0        | .0    | 10.0  | 7.4   | 7.3   | 25.0  | 8.1   | 9.7   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.0                |      |       |       |       |    |      | 4.0       | .0       |          | 5.4        | .0    | 5.1   | 6.3   | 1.9   | .0    | 3.4   | 2.4   |
| TOT OBS  | 210                | 926  | 725   | 124   | 3     | 0  | 1988 |           | 10.6     |          | 354        | 2     | 389   | 238   | 360   | 4     | 349   | 292   |
| TOT PCT  | 10.6               | 46.6 | 36.5  | 6.2   | .2    | .0 |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|----|------|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |      |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 6.8                | 14.9 | 3.9   | .3    | .0 |      | 25.9      | 10.5     |          | 26.3       | 27.4  | 25.6  | 24.3  |    |
| NE       | 7.0                | 25.4 | 10.5  | 1.2   | .0 |      | 44.1      | 12.5     |          | 43.3       | 43.1  | 46.1  | 44.5  |    |
| E        | 2.0                | 3.9  | 1.6   | .1    | .0 |      | 7.6       | 11.4     |          | 6.7        | 5.9   | 9.8   | 8.5   |    |
| SE       | 1.0                | 1.0  | .4    | .1    | .0 |      | 2.5       | 9.8      |          | 2.7        | 2.2   | 3.0   | 2.3   |    |
| S        | .9                 | .3   | .0    | .0    | .0 |      | 1.2       | 5.8      |          | 1.1        | .9    | 1.0   | 1.6   |    |
| SW       | 1.1                | .9   | .0    | .0    | .0 |      | 2.1       | 7.2      |          | 1.9        | 1.9   | 1.2   | 2.9   |    |
| W        | 2.4                | 1.2  | .4    | .1    | .0 |      | 4.0       | 7.6      |          | 3.7        | 4.1   | 3.9   | 4.1   |    |
| NW       | 4.2                | 3.8  | .7    | .1    | .0 |      | 8.7       | 8.3      |          | 9.0        | 9.0   | 7.5   | 8.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0 |      | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 4.0                |      |       |       |    |      | 4.0       | .0       |          | 5.3        | 5.6   | 1.9   | 3.0   |    |
| TOT OBS  | 585                | 1021 | 349   | 33    | 0  | 1988 |           | 10.6     |          | 356        | 627   | 364   | 641   |    |
| TOT PCT  | 29.4               | 51.4 | 17.6  | 1.7   | .0 |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1894-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00603 | 5.3  | 5.1 | 45.2 | 37.9               | 6.5   | .0    | .0  | 10.8  | 100.0    | 356       |
| 06609 | 5.6  | 6.4 | 47.5 | 34.4               | 6.1   | .0    | .0  | 10.2  | 100.0    | 627       |
| 12615 | 1.9  | 8.5 | 44.2 | 40.1               | 4.9   | .3    | .0  | 10.9  | 100.0    | 364       |
| 18621 | 3.0  | 6.4 | 47.7 | 35.6               | 7.0   | .3    | .0  | 10.6  | 100.0    | 641       |
| TOT   | 80   | 130 | 926  | 725                | 124   | 3     | 0   | 10.6  |          | 1988      |
| PCT   | 4.0  | 6.5 | 46.6 | 36.5               | 6.2   | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS'D | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 11.6 | 7.0  | 9.8  | 3.9          |              | 4.0                    |
| NE       | 11.1 | 12.1 | 14.3 | 7.4          |              | 4.4                    |
| E        | 3.6  | 1.1  | 1.4  | 1.0          |              | 3.7                    |
| SE       | .6   | .3   | .4   | .0           |              | 3.0                    |
| S        | .8   | .4   | .6   | .0           |              | 3.1                    |
| SW       | .8   | .6   | .2   | .0           |              | 2.8                    |
| W        | .7   | .5   | .7   | .3           |              | 4.5                    |
| NW       | 2.3  | 2.5  | 1.9  | .4           |              | 3.7                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .6   | .6   | .6   | .3           |              | 4.5                    |
| TOT OBS  | 107  | 83   | 99   | 44           | 333          | 4.1                    |
| TOT PCT  | 32.1 | 24.9 | 29.7 | 13.2         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .0  | .0  | .3  | 2.5 | 3.9  | 3.6  | .2   | .8   | .2   | .2    | 20.7    |       |
| .0  | .0  | .3  | 4.8 | 6.4  | 4.6  | 1.5  | .5   | .1   | .1    | 26.7    |       |
| .0  | .0  | .0  | .2  | .8   | .5   | .5   | .0   | .0   | .0    | 5.0     |       |
| .0  | .0  | .0  | .3  | .1   | .0   | .0   | .0   | .0   | .0    | .9      |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | 1.7     |       |
| .0  | .0  | .0  | .0  | .2   | .0   | .0   | .0   | .0   | .0    | 1.4     |       |
| .0  | .0  | .0  | .0  | .2   | .3   | .0   | .0   | .0   | .0    | 1.7     |       |
| .0  | .0  | .0  | .3  | 1.2  | .6   | .0   | .0   | .0   | .0    | 5.0     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .0  | .0   | .3   | .0   | .0   | .0   | .0    | 1.8     |       |
| 0   | 0   | 2   | 27  | 42   | 33   | 7    | 4    | 1    | 1     | 216     | 333   |
| .0  | .0  | .6  | 8.1 | 12.6 | 9.9  | 2.1  | 1.2  | .3   | .3    | 64.9    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .6        | .6   | .6   | .6   | .6   | .6   | .6    | .6   |
| >5000             | 1.8       | 1.8  | 1.8  | 1.8  | 1.8  | 1.8  | 1.8   | 1.8  |
| >3500             | 3.9       | 3.9  | 3.9  | 3.9  | 3.9  | 3.9  | 3.9   | 3.9  |
| >2000             | 12.6      | 13.5 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8  | 13.8 |
| >1000             | 23.7      | 25.4 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0  | 26.0 |
| >600              | 30.8      | 33.2 | 33.8 | 33.8 | 33.8 | 33.8 | 33.8  | 33.8 |
| >300              | 31.1      | 33.8 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4  | 34.4 |
| >150              | 31.1      | 33.8 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4  | 34.4 |
| >0                | 31.1      | 33.8 | 34.4 | 34.4 | 34.4 | 34.4 | 34.4  | 34.4 |
| TOTAL             | 104       | 113  | 115  | 115  | 115  | 115  | 115   | 115  |

TOTAL NUMBER OF OBS: 334

PCT FREQ NH <5/8: 65.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4   | 5   | 6    | 7   | 8    | OBS'D | TOTAL<br>OBS |
|-----|------|------|------|-----|-----|------|-----|------|-------|--------------|
| 6.5 | 13.0 | 18.9 | 16.9 | 9.9 | 4.5 | 11.0 | 9.0 | 10.2 | .0    | 354          |

PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

AUGUST

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32.5N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %  | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | 1.1  | 1.5  | .2  | .0  | .0  | .0  | .0  | .3  | .0  | .0   | 3.1   | 3.1          |
|              | TOT %  | 1.1  | 1.5  | .2  | .0  | .0  | .0  | .0  | .3  | .0  | .0   | 3.1   | 3.1          |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .5   | 1.0  | .0  | .0  | .0  | .0  | .0  | .1  | .0  | .2   | 1.7   | 1.7          |
|              | TOT %  | .5   | 1.0  | .0  | .0  | .0  | .0  | .0  | .1  | .0  | .2   | 1.7   | 1.7          |
| 2<5          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .2   | .1  | .0  | .0  | .0  | .0  | .2  | .0  | .2   | .8    | .8           |
|              | TOT %  | .0   | .2   | .1  | .0  | .0  | .0  | .0  | .2  | .0  | .2   | .8    | .8           |
| 5<10         | PCP    | .0   | .4   | .2  | .2  | .0  | .1  | .2  | .1  | .0  | .0   | 1.1   | 1.1          |
|              | NO PCP | 6.8  | 13.2 | 1.2 | .6  | .3  | .5  | .9  | 2.3 | .0  | 1.1  | 27.0  | 27.0         |
|              | TOT %  | 6.8  | 13.6 | 1.4 | .8  | .3  | .6  | 1.1 | 2.4 | .0  | 1.1  | 28.2  | 28.2         |
| 10+          | PCP    | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    | .2           |
|              | NO PCP | 21.4 | 29.9 | 4.6 | .6  | 1.0 | 1.0 | 1.6 | 4.7 | .0  | 1.3  | 66.1  | 66.1         |
|              | TOT %  | 21.5 | 30.0 | 4.6 | .6  | 1.0 | 1.0 | 1.6 | 4.7 | .0  | 1.3  | 66.3  | 66.3         |
| TOT OBS      |        |      |      |     |     |     |     |     |     |     |      |       | 522          |
| TOT PCT      |        | 29.9 | 46.3 | 6.4 | 1.4 | 1.3 | 1.5 | 2.6 | 7.7 | .0  | 2.9  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .4   | .2   | .1  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .6    | .6           |
|              | 11-21      | .2   | .5   | .1  | .0  | .0  | .0  | .0  | .2  | .0  | .0   | .8    | .8           |
|              | 22+        | .0   | .2   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    | .2           |
|              | TOT %      | .6   | .8   | .1  | .0  | .0  | .0  | .0  | .2  | .0  | .0   | 1.6   | 1.6          |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .1   | .1    | .1           |
|              | 4-10       | .3   | .2   | .0  | .0  | .0  | .0  | .0  | .1  | .0  | .0   | .5    | .5           |
|              | 11-21      | .2   | .4   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .5    | .5           |
|              | 22+        | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    | .1           |
|              | TOT %      | .4   | .7   | .0  | .0  | .0  | .0  | .0  | .1  | .0  | .1   | 1.2   | 1.2          |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .1  | .0  | .0  | .2   | .3    | .3           |
|              | 4-10       | .2   | .4   | .1  | .0  | .0  | .0  | .0  | .1  | .0  | .0   | .6    | .6           |
|              | 11-21      | .0   | .3   | .1  | .0  | .0  | .0  | .0  | .1  | .0  | .0   | .4    | .4           |
|              | 22+        | .0   | .0   | .1  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    | .1           |
|              | TOT %      | .2   | .6   | .2  | .0  | .0  | .0  | .1  | .2  | .0  | .2   | 1.4   | 1.4          |
| 5<10         | 0-3        | .2   | .3   | .0  | .0  | .1  | .2  | .1  | .3  | .0  | .8   | 1.9   | 1.9          |
|              | 4-10       | 2.3  | 2.6  | .7  | .4  | .2  | .3  | .3  | .9  | .0  | .0   | 7.5   | 7.5          |
|              | 11-21      | 2.3  | 5.3  | .3  | .1  | .0  | .0  | .1  | .5  | .0  | .0   | 8.6   | 8.6          |
|              | 22+        | .4   | .8   | .1  | .1  | .0  | .0  | .2  | .0  | .0  | .0   | 1.5   | 1.5          |
|              | TOT %      | 5.3  | 9.0  | 1.1 | .5  | .3  | .5  | .6  | 1.6 | .0  | .8   | 19.5  | 19.5         |
| 10+          | 0-3        | 1.3  | 1.0  | .5  | .4  | .2  | .5  | .4  | .3  | .0  | 2.2  | 6.6   | 6.6          |
|              | 4-10       | 13.1 | 15.3 | 2.7 | 1.1 | .7  | .8  | 1.3 | 4.6 | .0  | .0   | 39.5  | 39.5         |
|              | 11-21      | 8.0  | 15.1 | 1.7 | .5  | .2  | .4  | .3  | .9  | .0  | .0   | 27.2  | 27.2         |
|              | 22+        | 1.0  | 1.8  | .1  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | 2.9   | 2.9          |
|              | TOT %      | 23.3 | 33.2 | 5.0 | 1.9 | 1.1 | 1.7 | 2.0 | 5.8 | .0  | 2.2  | 76.3  | 76.3         |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |       | 994          |
| TOT PCT      |            | 29.7 | 44.3 | 6.3 | 2.4 | 1.3 | 2.2 | 2.7 | 7.8 | .0  | 3.3  | 100.0 |              |



PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+   | TOTAL       | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|---------|-------------|--------------------|--------------|
| 00003          | .0         | .0         | .0         | 8.7        | 17.4         | 14.5         | 1.4          | .0           | .0           | .0      | 42.0        | 58.0               | 69           |
| 06009          | .0         | .0         | 1.2        | 14.8       | 16.0         | 13.6         | 1.2          | 1.2          | 1.2          | 1.2     | 50.6        | 49.4               | 81           |
| 12015          | .0         | .0         | .9         | 6.2        | 7.1          | 6.2          | 4.4          | .9           | .0           | .0      | 25.7        | 74.3               | 113          |
| 18021          | .0         | .0         | .0         | 2.3        | 10.3         | 8.0          | .0           | 2.3          | .0           | .0      | 23.0        | 77.0               | 87           |
| TOT<br>PCT     | 0<br>.0    | 0<br>.0    | 2<br>.6    | 27<br>7.7  | 42<br>12.0   | 35<br>10.0   | 7<br>2.0     | 4<br>1.1     | 1<br>.3      | 1<br>.3 | 119<br>34.0 | 231<br>66.0        | 350<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1     | 1<2       | 2<5       | 5<10        | 10+         | TOTAL<br>OBS  |
|----------------|---------|-----------|-----------|-----------|-------------|-------------|---------------|
| 00003          | .0      | .5        | .5        | 2.6       | 13.3        | 83.2        | 196           |
| 06009          | .0      | 2.0       | 2.0       | 2.0       | 24.7        | 69.2        | 299           |
| 12015          | .0      | 1.4       | 1.8       | .0        | 19.7        | 77.1        | 218           |
| 18021          | .0      | 2.6       | .3        | 1.0       | 19.6        | 76.5        | 306           |
| TOT<br>PCT     | 0<br>.0 | 18<br>1.8 | 12<br>1.2 | 14<br>1.4 | 203<br>19.9 | 772<br>75.8 | 1019<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0            | .0         | 9.1         | 33.3            | 57.6              | 66           |
| 06009          | .0            | 1.3        | 19.7        | 31.6            | 48.7              | 76           |
| 12015          | .0            | .9         | 7.3         | 19.1            | 73.6              | 110          |
| 18021          | .0            | .0         | 3.7         | 22.0            | 74.4              | 82           |
| TOT<br>PCT     | 0<br>.0       | 2<br>.6    | 32<br>9.6   | 85<br>25.4      | 217<br>65.0       | 334<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .0    | .0    | .3    | .0     | 1            | .3          |
| 80/84  | .0   | .0    | .0    | .0    | .3    | 1.1   | .0    | .0     | 5            | 1.4         |
| 75/79  | .0   | .0    | .3    | .3    | 6.1   | 10.8  | 3.0   | 1.7    | 80           | 22.1        |
| 70/74  | .0   | .0    | .0    | .0    | 10.2  | 25.7  | 28.7  | 6.4    | 257          | 71.0        |
| 65/69  | .0   | .0    | .0    | .0    | .3    | 1.4   | 2.5   | 1.1    | 19           | 5.2         |
| TOTAL  | 0    | 0     | 1     | 1     | 61    | 141   | 125   | 33     | 362          | 100.0       |
| PCT    | .0   | .0    | .3    | .3    | 16.9  | 39.0  | 34.5  | 9.1    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|-----|-----|-----|-----|-----|------|
| .0   | .0   | .0  | .0 | .2  | .1  | .0  | .0  | .0  | .0   |
| .3   | .0   | .0  | .0 | .0  | .0  | .1  | .4  | .0  | .6   |
| 5.4  | 10.5 | 1.9 | .0 | .7  | .3  | .9  | 1.9 | .0  | .6   |
| 22.7 | 33.4 | 4.5 | .3 | .6  | 1.2 | 1.2 | 5.0 | .0  | 2.2  |
| 1.0  | 3.1  | .3  | .0 | .0  | .0  | .0  | .3  | .0  | .6   |
| 29.4 | 47.0 | 6.7 | .3 | 1.5 | 1.5 | 2.2 | 7.6 | .0  | 3.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 85  | 76  | 74  | 71  | 68 | 68 | 66  | 71.4 | 357          |
| 06009          | 84  | 77  | 75  | 72  | 68 | 67 | 66  | 71.6 | 630          |
| 12015          | 84  | 82  | 79  | 74  | 71 | 69 | 68  | 74.6 | 351          |
| 18021          | 86  | 81  | 78  | 73  | 70 | 68 | 64  | 73.4 | 628          |
| TOT            | 86  | 80  | 78  | 72  | 69 | 68 | 64  | 72.7 | 1966         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | 6.0   | 29.9  | 50.7  | 13.4   | 82   | 67           |
| 06009          | .0   | 1.0   | 10.8  | 29.4  | 45.1  | 13.7   | 80   | 102          |
| 12015          | .0   | .9    | 29.6  | 40.9  | 22.6  | 6.1    | 75   | 115          |
| 18021          | .0   | .0    | 14.4  | 52.2  | 27.8  | 5.6    | 77   | 90           |
| TOT            | 0    | 2     | 62    | 144   | 131   | 35     | 78   | 374          |

PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1894-1973

AUGUST

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32.5N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 7/8                | .0       | .0       | .0       | .0       | .6       | .2       | 4     | .2       | .6        |
| 6                  | .0       | .0       | .0       | .0       | .9       | .0       | 4     | .4       | .4        |
| 5                  | .0       | .0       | .0       | .4       | 1.7      | .0       | 10    | .4       | 1.7       |
| 4                  | .0       | .0       | .2       | 1.7      | 1.7      | .0       | 17    | .2       | 3.4       |
| 3                  | .0       | .0       | .0       | 3.0      | 1.7      | .0       | 22    | 1.1      | 3.7       |
| 2                  | .0       | .0       | 1.7      | 7.7      | .2       | .0       | 45    | .6       | 9.0       |
| 1                  | .0       | .0       | 3.9      | 10.1     | .6       | .0       | 68    | 1.1      | 13.5      |
| 0                  | .0       | .0       | 9.7      | 11.8     | .6       | .0       | 103   | .2       | 21.9      |
| -1                 | .0       | .0       | 14.6     | 7.1      | .2       | .0       | 102   | .6       | 21.3      |
| -2                 | .0       | .4       | 7.7      | 1.7      | .4       | .0       | 48    | .0       | 10.3      |
| -3                 | .0       | .4       | 2.6      | .9       | .0       | .0       | 18    | .0       | 3.9       |
| -4                 | .0       | .9       | 2.2      | .0       | .0       | .0       | 14    | .0       | 3.0       |
| -5                 | .0       | .0       | .0       | .2       | .0       | .0       | 4     | .0       | .9        |
| -6                 | .0       | .0       | .2       | .6       | .0       | .0       | 4     | .0       | .9        |
| -7/-8              | .0       | .0       | .2       | .0       | .0       | .0       | 1     | .0       | .2        |
| -9/-10             | .2       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .2        |
| TOTAL              | 1        | 8        | 203      | 211      | 41       | 1        | 465   | 23       | 442       |
| PCT                | .2       | 1.7      | 43.7     | 45.4     | 8.8      | .2       | 100.0 | 4.9      | 95.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | 1.3 | 2.1  | .9    | .0    | .0    | .0  | 4.4  | .1  | 2.9  | .0    | .0    | .0    | .0  | 3.0  |
| 1-2     | .5  | 10.7 | 1.7   | .0    | .0    | .0  | 13.0 | .0  | 10.6 | 4.0   | .0    | .0    | .0  | 14.6 |
| 3-4     | .5  | 6.5  | 5.3   | .0    | .0    | .0  | 12.3 | .0  | 6.6  | 12.3  | .0    | .0    | .0  | 18.9 |
| 5-6     | .0  | .0   | 2.9   | .0    | .0    | .0  | 2.9  | .0  | 1.1  | 6.7   | .5    | .0    | .0  | 8.3  |
| 7       | .0  | .0   | .4    | .4    | .0    | .0  | .8   | .0  | .0   | 1.9   | .1    | .0    | .0  | 2.0  |
| 8-9     | .0  | .0   | .4    | .0    | .0    | .0  | .4   | .0  | .5   | .1    | .0    | .0    | .0  | .7   |
| 10-11   | .0  | .0   | .0    | 1.1   | .0    | .0  | 1.1  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 2.4 | 19.3 | 11.6  | 1.5   | .0    | .0  | 34.8 | .1  | 21.7 | 25.0  | .7    | .0    | .0  | 47.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .5  | .0   | .0    | .0    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 3.3  | .5    | .0    | .0    | .0  | 3.8 | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .5   | 1.5   | .0    | .0    | .0  | 2.0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .0   | .5    | .0    | .0    | .0  | .5  |
| 7       | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 3.8  | 2.8   | .0    | .0    | .0  | 7.1 | .0  | .1   | .5    | .0    | .0    | .0  | .7  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 1-2     | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .5    | .0    | .0    | .0  | .5  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| TOT PCT | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .0  | .0   | .7    | .0    | .0    | .0  | .7  |     |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .1  | .3   | .1    | .0    | .0    | .0  | .5  |      |           |
| 1-2     | .5  | .0   | .0    | .0    | .0    | .0  | .5  | .0  | 3.3  | .7    | .0    | .0    | .0  | 4.0 |      |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |      |           |
| 5-6     | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .5    | .0    | .0    | .0  | .5  |      |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .5  | .0   | .4    | .0    | .0    | .0  | .9  | .1  | 3.7  | 1.3   | .0    | .0    | .0  | 5.2 | 97.4 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 5.8 | 5.2  | 1.0   | .0    | .0    | .0  | 12.0  |         |
| 1-2     | 1.0 | 28.3 | 6.8   | .0    | .0    | .0  | 36.1  |         |
| 3-4     | .5  | 13.6 | 19.4  | .0    | .0    | .0  | 33.5  |         |
| 5-6     | .0  | 1.0  | 11.0  | .5    | .0    | .0  | 12.6  |         |
| 7       | .0  | .0   | 2.6   | .5    | .0    | .0  | 3.1   |         |
| 8-9     | .0  | .5   | 1.0   | .0    | .0    | .0  | 1.6   |         |
| 10-11   | .0  | .0   | .0    | 1.0   | .0    | .0  | 1.0   |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.3 | 48.7 | 41.9  | 2.1   | .0    | .0  | 100.0 | 191     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| 6-7          | 2.2 | 15.0 | 15.0 | 4.5  | 2.2  | 1.9 | .7    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 111   | 3        |
| 8-9          | .0  | 1.5  | 9.4  | 10.1 | 3.7  | 2.6 | .4    | .7 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 76    | 5        |
| 10-11        | .0  | .7   | 1.9  | 3.0  | 4.1  | .7  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 28    | 5        |
| 12-13        | .0  | .4   | .4   | 1.5  | .0   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6     | 4        |
| >13          | .0  | .0   | 1.1  | .0   | .0   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3     | 3        |
| INLET        | 1.9 | 3.7  | 4.1  | 3.7  | 1.5  | .4  | .7    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 43    | 4        |
| TOTAL        | 11  | 57   | 85   | 61   | 31   | 15  | 5     | 2  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 267   |          |
| PCT          | 4.1 | 21.3 | 31.8 | 22.6 | 11.6 | 5.6 | 1.9   | .7 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



SEPTEMBER

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

AREA 0002 MADEIRA ISLANDS  
32.5N 16.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |            |           |            |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|------------|-----------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG | DUST SNOW | NO SIG WEA |
| N                  | .7   | 1.9       | .4   | .0        | .0   | .0             | .0   | 3.1             | .4             | .6                      | 1.8         | .0                  | .0         | .0         | .0        | 94.0       |
| NE                 | 1.7  | 1.0       | .6   | .0        | .0   | .0             | .0   | 3.2             | 2.0            | .0                      | 2.6         | .0                  | .0         | .0         | .0        | 92.1       |
| E                  | .0   | 2.8       | .0   | .0        | .0   | .0             | .0   | 2.8             | .0             | .0                      | 5.6         | .0                  | .0         | .0         | .0        | 91.7       |
| SE                 | .0   | 11.1      | .0   | .0        | .0   | .0             | .0   | 11.1            | .0             | .0                      | .0          | .0                  | .0         | .0         | .0        | 88.9       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | 20.4           | .0                      | .0          | .0                  | .0         | .0         | .0        | 79.6       |
| SW                 | 3.2  | 8.2       | .0   | .0        | .0   | .0             | .0   | 11.4            | .5             | .0                      | .0          | .0                  | .0         | .0         | .0        | 88.2       |
| W                  | 3.2  | 5.0       | 1.4  | .0        | .0   | .0             | .0   | 9.6             | .0             | 2.8                     | 1.4         | .0                  | .0         | .0         | .0        | 87.6       |
| NW                 | 4.8  | 2.2       | .0   | .0        | .0   | .0             | .0   | 7.1             | 1.5            | .0                      | 1.5         | .0                  | 1.5        | .0         | .0        | 88.5       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0         | .0        | .0         |
| CALM               | 4.5  | .0        | .0   | .0        | .0   | .0             | .0   | 4.5             | .0             | .0                      | .0          | .0                  | 4.5        | .0         | .0        | 90.9       |
| TOT PCT            | 2.0  | 2.6       | .5   | .0        | .0   | .0             | .0   | 5.0             | 1.4            | .5                      | 2.0         | .0                  | .3         | .0         | .0        | 91.0       |
| TOT OBS:           | 658  |           |      |           |      |                |      |                 |                |                         |             |                     |            |            |           |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                |                           |               |               |              |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|----------------|---------------------------|---------------|---------------|--------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | 3.0                | 2.3          | .0   | .0           | .0   | .0                    | .0   | 5.3                | 2.3                     | 1.5          | .8             | .0                        | .0            | .0            | .0           | 91.0             |
| 06009         | 1.1                | 2.2          | 1.7  | .0           | .0   | .0                    | .0   | 5.0                | 2.2                     | .0           | 3.4            | .0                        | .6            | .0            | .0           | 88.8             |
| 12015         | 1.1                | 2.8          | 1.1  | .0           | .0   | .0                    | .0   | 5.1                | 1.1                     | .0           | 1.7            | .0                        | .6            | .0            | .0           | 91.5             |
| 18021         | 2.5                | 4.5          | .5   | .0           | .0   | .0                    | .0   | 7.4                | .5                      | .5           | 1.5            | .0                        | .0            | .0            | .0           | 90.1             |
| TOT PCT       | 1.9                | 3.0          | .9   | .0           | .0   | .0                    | .0   | 5.8                | 1.4                     | .4           | 1.9            | .0                        | .3            | .0            | .0           | 90.3             |
| TOT OBS:      | 691                |              |      |              |      |                       |      |                    |                         |              |                |                           |               |               |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.6                | 12.6 | 6.3   | .8    | .0    | .0  |      | 21.3      | 9.5      |          | 22.0       | 27.5  | 22.6  | 19.4  | 22.5  | 21.4  | 20.8  | 19.2  |
| NE       | 1.8                | 15.0 | 13.6  | 1.2   | .0    | .0  |      | 32.2      | 10.9     |          | 31.4       | 25.0  | 29.3  | 28.4  | 33.6  | 35.7  | 37.6  | 31.2  |
| E        | 1.4                | 4.1  | 2.5   | .2    | .1    | .0  |      | 8.2       | 9.1      |          | 7.0        | 5.0   | 9.1   | 9.5   | 7.8   | 14.3  | 6.9   | 9.4   |
| SE       | .6                 | 1.8  | .3    | .0    | .0    | .0  |      | 2.7       | 7.1      |          | 1.3        | .0    | 2.6   | 2.6   | 4.0   | 14.3  | 2.6   | 2.9   |
| S        | .7                 | 1.6  | .4    | .0    | .0    | .0  |      | 2.7       | 6.9      |          | 3.5        | 10.0  | 3.0   | 2.6   | 2.9   | 7.1   | 1.6   | 2.6   |
| SW       | 1.2                | 4.6  | 2.0   | .5    | .0    | .0  |      | 8.4       | 9.1      |          | 8.3        | 20.0  | 8.5   | 9.8   | 8.7   | 7.1   | 8.8   | 5.6   |
| W        | 1.6                | 4.9  | 2.6   | .3    | .1    | .0  |      | 9.5       | 9.1      |          | 10.8       | .0    | 9.1   | 9.5   | 8.8   | .0    | 10.4  | 8.8   |
| NW       | 1.3                | 6.3  | 2.5   | .2    | .0    | .0  |      | 10.2      | 8.5      |          | 10.2       | 12.5  | 10.5  | 11.3  | 9.3   | .0    | 8.3   | 13.0  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.8                |      |       |       |       |     |      | 4.8       | .0       |          | 5.5        | .0    | 5.4   | 6.8   | 2.3   | .0    | 3.0   | 7.5   |
| TOT OBS  | 295                | 1018 | 598   | 62    | 2     | 0   | 1975 |           | 9.2      |          | 34.7       | 10    | 372   | 234   | 383   | 7     | 368   | 254   |
| TOT PCT  | 14.9               | 51.5 | 30.3  | 3.1   | .1    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 7.2                | 11.8 | 2.2   | .2    | .0  |           | 21.3     | 9.5      | 22.2       | 21.4  | 22.4  | 20.1  |
| NE       | 7.7                | 18.5 | 5.9   | .2    | .0  |           | 32.2     | 10.9     | 31.2       | 29.0  | 33.7  | 35.0  |
| E        | 3.1                | 4.1  | .9    | .1    | .0  |           | 8.2      | 9.1      | 6.9        | 9.3   | 7.9   | 7.9   |
| SE       | 1.3                | 1.2  | .2    | .0    | .0  |           | 2.7      | 7.1      | 1.3        | 2.6   | 4.2   | 2.7   |
| S        | 1.6                | 1.0  | .1    | .0    | .0  |           | 2.7      | 6.9      | 3.6        | 2.8   | 3.0   | 2.0   |
| SW       | 3.5                | 3.8  | .8    | .2    | .0  |           | 8.4      | 9.1      | 8.6        | 9.0   | 8.7   | 7.5   |
| W        | 3.9                | 4.5  | 1.1   | .1    | .0  |           | 9.5      | 9.1      | 10.5       | 9.3   | 8.7   | 9.7   |
| NW       | 4.3                | 4.9  | 1.0   | .0    | .0  |           | 10.2     | 8.5      | 10.3       | 10.8  | 9.2   | 10.2  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 4.8                |      |       |       |     |           | 4.8      | .0       | 5.3        | 5.9   | 2.3   | 4.8   |
| TOT OBS  | 737                | 984  | 240   | 14    | 0   | 1975      |          | 9.2      | 357        | 608   | 390   | 622   |
| TOT PCT  | 37.3               | 49.8 | 12.2  | .7    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

SEPTEMBER

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|------|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |      |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00603 | 5.3  | 9.5  | 52.7 | 29.7               | 2.5   | .3    | .0  | 9.0   | 100.0    | 357       |
| 06609 | 5.9  | 11.7 | 53.6 | 25.2               | 3.5   | .0    | .0  | 8.5   | 100.0    | 606       |
| 12615 | 2.3  | 10.5 | 49.7 | 34.1               | 3.3   | .0    | .0  | 9.8   | 100.0    | 390       |
| 18621 | 4.8  | 8.8  | 50.0 | 33.1               | 3.1   | .2    | .0  | 9.5   | 100.0    | 622       |
| TOT   | 94   | 201  | 1018 | 598                | 62    | 2     | 0   | 9.2   |          | 1975      |
| PCT   | 4.8  | 10.2 | 51.5 | 30.3               | 3.1   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 11.2 | 6.2  | 9.9  | 1.6          |              | 3.8                    |
| NE       | 9.9  | 9.4  | 11.0 | 1.8          |              | 4.0                    |
| E        | 2.3  | 2.4  | 2.1  | .9           |              | 3.8                    |
| SE       | .3   | .3   | .6   | .0           |              | 3.8                    |
| S        | .9   | .1   | .9   | .2           |              | 4.2                    |
| SW       | 1.8  | .7   | 2.3  | .9           |              | 4.4                    |
| W        | 3.0  | 1.6  | 3.4  | .9           |              | 4.1                    |
| NW       | 4.9  | 1.5  | 3.3  | .4           |              | 3.3                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.7  | .5   | 1.0  | .2           |              | 3.5                    |
| TOT OBS  | 148  | 93   | 141  | 28           | 410          | 3.8                    |
| TOT PCT  | 36.1 | 22.7 | 34.4 | 6.8          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .0  | .0  | .2  | .2  | 1.4  | 5.1  | 1.0  | .2   | .2   | .0    | 20.5    |       |
| .2  | .0  | .1  | 1.5 | 2.7  | 1.9  | 1.8  | .8   | .3   | .2    | 22.6    |       |
| .0  | .0  | .4  | .7  | .9   | .0   | .2   | .0   | .0   | .0    | 5.5     |       |
| .0  | .0  | .0  | .1  | .1   | .0   | .0   | .0   | .0   | .0    | 1.1     |       |
| .0  | .0  | .2  | .0  | .2   | .2   | .2   | .0   | .0   | .0    | 1.2     |       |
| .0  | .0  | .4  | .8  | .3   | .6   | .2   | .2   | .0   | .0    | 3.1     |       |
| .0  | .0  | .4  | .9  | 1.1  | .9   | .0   | .2   | .0   | .0    | 5.3     |       |
| .0  | .0  | .1  | .1  | 1.1  | 1.0  | .5   | .2   | .0   | .0    | 7.0     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .0  | .5   | .5   | .2   | .0   | .0   | .0    | 2.2     |       |
| 1   | 0   | 5   | 16  | 33   | 46   | 17   | 8    | 2    | 1     | 281     | 410   |
| .2  | .0  | 1.2 | 3.9 | 8.0  | 11.2 | 4.1  | 2.0  | .5   | .2    | 68.5    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .7        | .7   | .7   | .7   | .7   | .7   | .7    | .7   |
| >5000             | 2.4       | 2.6  | 2.6  | 2.6  | 2.6  | 2.6  | 2.6   | 2.6  |
| >3500             | 6.5       | 6.9  | 6.9  | 6.9  | 6.9  | 6.9  | 6.9   | 6.9  |
| >2000             | 15.3      | 17.0 | 18.2 | 18.2 | 18.2 | 18.2 | 18.2  | 18.2 |
| >1000             | 22.0      | 24.9 | 26.1 | 26.1 | 26.1 | 26.1 | 26.1  | 26.1 |
| >600              | 25.1      | 28.5 | 29.7 | 29.7 | 29.7 | 29.7 | 29.7  | 29.7 |
| >300              | 26.1      | 29.7 | 30.9 | 30.9 | 30.9 | 30.9 | 30.9  | 30.9 |
| >150              | 26.3      | 29.9 | 31.1 | 31.1 | 31.1 | 31.1 | 31.1  | 31.1 |
| >0                | 26.3      | 29.9 | 31.1 | 31.1 | 31.1 | 31.3 | 31.3  | 31.3 |
| TOTAL             | 110       | 125  | 130  | 130  | 130  | 131  | 131   | 131  |

TOTAL NUMBER OF OBS: 410

PCT FREQ NH <5/8: 68.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6    | 7   | 8   | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|------|-----|-----|-------|--------------|
| 6.6 | 16.4 | 22.8 | 12.3 | 10.7 | 8.7 | 10.0 | 7.5 | 5.0 | .0    | 439          |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1894-1973

SEPTEMBER

AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .2   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .2    |              |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .2   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .2    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .4   | .6   | .2  | .0  | .0  | .0  | .2   | .2   | .0  | .0   | 1.5   |              |
|              | TOT %  | .4   | .6   | .2  | .0  | .0  | .0  | .2   | .2   | .0  | .0   | 1.5   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
| 2<5          | PCP    | .0   | *    | .1  | .0  | .0  | .2  | .1   | .0   | .0  | .2   | .6    |              |
|              | NO PCP | .6   | .0   | .0  | .0  | .2  | .0  | .0   | .0   | .0  | .0   | .8    |              |
|              | TOT %  | .6   | *    | .1  | .0  | .2  | .2  | .1   | .0   | .0  | .2   | 1.4   |              |
| 5<10         | PCP    | .3   | .6   | .1  | .0  | .0  | .7  | .7   | .5   | .0  | .0   | 2.9   |              |
|              | NO PCP | 6.9  | 9.4  | 1.1 | .5  | .7  | 3.4 | 4.0  | 2.8  | .0  | 1.4  | 30.1  |              |
|              | TOT %  | 7.3  | 10.0 | 1.1 | .5  | .7  | 4.1 | 4.7  | 3.3  | .0  | 1.4  | 33.0  |              |
| 10+          | PCP    | .5   | .3   | .0  | .2  | .0  | *   | .3   | .2   | .0  | .0   | 1.4   |              |
|              | NO PCP | 16.6 | 20.7 | 5.4 | .8  | 1.2 | 4.0 | 5.5  | 6.5  | .0  | 1.8  | 62.6  |              |
|              | TOT %  | 17.1 | 21.0 | 5.4 | .9  | 1.2 | 4.0 | 5.8  | 6.7  | .0  | 1.8  | 64.0  |              |
| TOT OBS      |        |      |      |     |     |     |     |      |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |      |      |     |      |       |              |
|              |        | 25.3 | 31.8 | 6.8 | 1.4 | 2.1 | 8.4 | 10.7 | 10.2 | .0  | 3.3  | 100.0 | 658          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .1  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .0   | .1   | .1  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
| 1/2<1        | 0-3        | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 4-10       | .1   | .2   | .1  | .0  | .0  | .0  | .1  | .0  | .0  | .0   | .5    |              |
|              | 11-21      | *    | .1   | .0  | .0  | .0  | *   | *   | .1  | .0  | .0   | .4    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .2   | .4   | .1  | .0  | .0  | *   | .1  | .1  | .0  | .0   | 1.0   |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | *   | *   | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0  | .0  | .0  | *   | *   | .0  | .0  | .0   | .1    |              |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .1   | .1    |              |
|              | 4-10       | .4   | .1   | .0  | .0  | .1  | .1  | .0  | .0  | .0  | .0   | .6    |              |
|              | 11-21      | .1   | *    | .1  | .0  | .0  | *   | *   | .0  | .0  | .0   | .3    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .1  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .4   | .1   | .1  | .0  | .1  | .2  | *   | .0  | .0  | .1   | 1.1   |              |
| 5<10         | 0-3        | .2   | .3   | .1  | .1  | .1  | .0  | .1  | .1  | .0  | .9   | 2.0   |              |
|              | 4-10       | 2.8  | 3.0  | .4  | .2  | .1  | 1.4 | 1.4 | 1.2 | .0  | .0   | 10.4  |              |
|              | 11-21      | 1.8  | 3.3  | .3  | .0  | .2  | 1.3 | 1.4 | .6  | .0  | .0   | 8.8   |              |
|              | 22+        | .1   | *    | *   | .0  | .0  | *   | .1  | .2  | .0  | .0   | .5    |              |
|              | TOT %      | 4.8  | 6.7  | .8  | .4  | .4  | 2.7 | 3.0 | 2.1 | .0  | .9   | 21.8  |              |
| 10+          | 0-3        | 1.8  | 2.1  | 1.2 | .4  | .2  | .9  | 1.1 | 1.0 | .0  | 2.5  | 11.3  |              |
|              | 4-10       | 10.5 | 13.8 | 3.3 | 1.1 | .7  | 2.9 | 4.1 | 4.9 | .0  | .0   | 41.3  |              |
|              | 11-21      | 5.0  | 10.5 | 1.5 | .2  | .4  | 1.4 | 1.4 | 1.6 | .0  | .0   | 22.0  |              |
|              | 22+        | .4   | .5   | .1  | .0  | .1  | .1  | .0  | .0  | .0  | .0   | 1.2   |              |
|              | TOT %      | 17.8 | 26.8 | 6.1 | 1.8 | 1.4 | 5.4 | 6.6 | 7.5 | .0  | 2.5  | 75.9  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |     |     |     |      |       |              |
|              |            | 23.3 | 34.1 | 7.2 | 2.1 | 1.9 | 8.4 | 9.9 | 9.7 | .0  | 3.5  | 100.0 | 1121         |



PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

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32.5N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .0         | 2.2        | 6.7        | 4.4          | 15.6         | 2.2          | 2.2          | 1.1          | .0    | 34.4  | 65.6               | 90           |
| 06009         | .0         | .0         | 1.2        | 2.3        | 7.0          | 16.3         | 4.7          | 1.2          | .0           | .0    | 32.6  | 67.4               | 86           |
| 12015         | .8         | .8         | 1.6        | 3.1        | 7.8          | 7.0          | 5.5          | 3.9          | .0           | .8    | 31.3  | 68.8               | 128          |
| 18021         | .0         | .0         | .0         | 3.1        | 10.0         | 7.7          | 3.8          | .0           | .8           | .0    | 25.4  | 74.6               | 130          |
| TOT           | 1          | 1          | 5          | 16         | 33           | 47           | 18           | 8            | 2            | 1     | 132   | 302                | 434          |
| PCT           | .2         | .2         | 1.2        | 3.7        | 7.6          | 10.8         | 4.1          | 1.8          | .5           | .2    | 30.4  | 69.6               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .4    | .0  | 2.2 | 20.1 | 77.3 | 229          |
| 06009         | .0   | 1.2   | .0  | 1.2 | 28.3 | 69.3 | 329          |
| 12015         | .8   | 1.2   | .0  | .0  | 19.4 | 78.7 | 253          |
| 18021         | .0   | .9    | .3  | .9  | 20.9 | 77.0 | 344          |
| TOT           | 2    | 11    | 1   | 12  | 260  | 869  | 1155         |
| PCT           | .2   | 1.0   | .1  | 1.0 | 22.5 | 75.2 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|----------------|-------------------|--------------|
| 00003         | .0            | 2.3        | 12.6        | 24.1           | 63.2              | 87           |
| 06009         | .0            | 1.3        | 5.1         | 30.4           | 64.6              | 79           |
| 12015         | .8            | 3.2        | 6.4         | 25.4           | 68.0              | 125          |
| 18021         | .0            | .0         | 4.7         | 21.3           | 74.0              | 127          |
| TOT           | 1             | 7          | 29          | 104            | 285               | 418          |
| PCT           | .2            | 1.7        | 6.9         | 24.9           | 68.2              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .3    | .8    | .3    | .3    | .0     | 6            | 1.5         |
| 75/79  | .0   | .0    | .0    | 2.1   | 3.6   | 8.5   | 4.4   | 1.0    | 76           | 19.6        |
| 70/74  | .0   | .0    | .0    | 1.3   | 13.7  | 25.3  | 24.2  | 9.5    | 287          | 74.0        |
| 65/69  | .0   | .0    | .0    | .0    | .5    | 1.3   | 2.3   | .8     | 19           | 4.9         |
| TOTAL  | 0    | 0     | 0     | 14    | 72    | 137   | 121   | 44     | 388          | 100.0       |
| PCT    | .0   | .0    | .0    | 3.6   | 18.6  | 35.3  | 31.2  | 11.3   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| .3   | .6   | .2  | .0  | .0  | .0  | .3  | .0  | .0  | .3   |
| 4.4  | 5.6  | 2.9 | .0  | .6  | 1.5 | 1.4 | 1.9 | .0  | 1.3  |
| 19.6 | 27.3 | 5.0 | 1.5 | 1.9 | 4.5 | 6.3 | 5.6 | .0  | 2.3  |
| 2.0  | 1.8  | .0  | .0  | .0  | .0  | .5  | .1  | .0  | .5   |
| 26.3 | 35.3 | 8.1 | 1.5 | 2.4 | 6.0 | 8.3 | 7.7 | .0  | 4.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 75  | 74  | 72  | 68 | 64 | 61  | 71.4 | 354          |
| 06009         | 84  | 79  | 76  | 72  | 68 | 66 | 63  | 71.7 | 600          |
| 12015         | 84  | 83  | 80  | 74  | 70 | 68 | 65  | 74.5 | 382          |
| 18021         | 84  | 82  | 78  | 73  | 70 | 68 | 62  | 73.5 | 605          |
| TOT           | 84  | 81  | 78  | 72  | 69 | 66 | 61  | 72.8 | 1941         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 12.0  | 28.9  | 38.6  | 20.5  | 81    | 83     |      |              |
| 06009         | .0   | 3.1   | 13.4  | 34.0  | 38.1  | 11.3  | 79    | 97     |      |              |
| 12015         | .0   | 8.3   | 27.5  | 33.3  | 25.8  | 5.0   | 74    | 120    |      |              |
| 18021         | .0   | .9    | 17.8  | 42.1  | 27.1  | 12.1  | 78    | 107    |      |              |
| TOT           | 0    | 14    | 75    | 142   | 129   | 47    | 78    | 407    |      |              |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | W0<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .2       | .2       |          | 2     | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .2       | .3       | .2       | 4     | .0       | .6        |
| 6                  | .0       | .0       | .0       | .5       | .2       | .2       | 5     | .0       | .8        |
| 5                  | .0       | .0       | .0       | .3       | 1.4      | .0       | 11    | .2       | 1.6       |
| 4                  | .0       | .0       | .0       | 1.1      | 1.6      | .0       | 17    | .2       | 2.6       |
| 3                  | .0       | .0       | .2       | 2.6      | 1.3      | .0       | 25    | .0       | 4.0       |
| 2                  | .0       | .0       | .6       | 3.9      | 1.1      | .0       | 35    | .2       | 5.5       |
| 1                  | .0       | .0       | 3.1      | 9.0      | .3       | .0       | 77    | .2       | 12.2      |
| 0                  | .0       | .0       | 8.0      | 12.9     | .6       | .0       | 134   | .6       | 20.9      |
| -1                 | .0       | .2       | 10.1     | 6.4      | .0       | .0       | 104   | .3       | 16.4      |
| -2                 | .0       | .6       | 11.1     | 4.0      | .0       | .0       | 98    | .5       | 15.3      |
| -3                 | .0       | .5       | 7.1      | 1.4      | .0       | .0       | 56    | .0       | 9.0       |
| -4                 | .0       | .2       | 3.2      | 1.0      | .0       | .0       | 27    | .0       | 4.3       |
| -5                 | .0       | .5       | 1.3      | .2       | .0       | .0       | 12    | .0       | 1.9       |
| -6                 | .0       | .3       | .8       | .0       | .0       | .0       | 7     | .0       | 1.1       |
| -7/-8              | .0       | .0       | .5       | .2       | .0       | .0       | 4     | .0       | .6        |
| -9/-10             | .5       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | .5        |
| -11/-13            | .0       | .0       | .2       | .0       | .0       | .0       | 1     | .0       | .2        |
| TOTAL              | 3        | 14       | 287      | 271      | 44       | 3        | 622   | 13       | 609       |
| PCT                | .5       | 2.3      | 46.1     | 43.6     | 7.1      | .5       | 100.0 | 2.1      | 97.9      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 3.6  | .0    | .0    | .0    | .0  | 4.3  | .9  | .7   | .0    | .0    | .0    | .0  | 1.7  |
| 1-2     | .6  | 10.9 | 2.7   | .0    | .0    | .0  | 14.2 | .5  | 7.2  | 3.5   | .0    | .0    | .0  | 11.2 |
| 3-4     | .0  | 4.6  | 6.3   | .0    | .0    | .0  | 11.0 | .0  | 2.1  | 7.2   | .0    | .0    | .0  | 9.3  |
| 5-6     | .0  | .8   | .9    | .3    | .0    | .0  | 2.1  | .0  | .8   | 5.4   | .1    | .0    | .0  | 6.3  |
| 7       | .0  | .0   | .7    | .0    | .0    | .0  | .7   | .0  | .0   | .9    | .0    | .0    | .0  | .9   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | 1.3   | .0    | .0    | .0  | 1.3  |
| 10-11   | .0  | .0   | .0    | .3    | .0    | .0  | .3   | .0  | .0   | .0    | .5    | .0    | .0  | .5   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.4 | 19.9 | 10.8  | .6    | .0    | .0  | 32.7 | 1.5 | 10.9 | 18.2  | .6    | .0    | .0  | 31.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .6  | .6   | .0    | .0    | .0    | .0  | 1.3 | .2  | .0   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .4  | 2.3  | .7    | .0    | .0    | .0  | 3.5 | .0  | .4   | .1    | .0    | .0    | .0  | .5  |
| 3-4     | .0  | .8   | 1.2   | .0    | .0    | .0  | 2.0 | .4  | .0   | .0    | .0    | .0    | .0  | .4  |
| 5-6     | .0  | .0   | 1.2   | .0    | .0    | .0  | 1.2 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 1.1 | 3.8  | 3.1   | .0    | .0    | .0  | 7.9 | .6  | .4   | .1    | .0    | .0    | .0  | 1.2 |

PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER  
TABLE 18 (CONT)

AREA 0002 MADEIRA ISLANDS  
32.5N 16.6W

## PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .4   | .0    | .0    | .0    | .0  | .7  | .2  | .0   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .9   | .8    | .0    | .0    | .0  | 1.8 |
| 3-4     | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | 1.7  | 1.1   | .0    | .0    | .0  | 2.7 |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .8    | .0    | .0    | .0  | .8  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .4    | .0    | .0  | .4  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | .4   | .3    | .3    | .0    | .0  | 1.4 | .2  | 2.6  | 2.8   | .5    | .0    | .0  | 6.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .3  | .4   | .0    | .0    | .0    | .0  | .7  | .0  | 2.2  | .0    | .0    | .0    | .0  | .0  | 2.2       |
| 1-2     | .0  | 2.8  | .0    | .0    | .0    | .0  | 2.8 | .1  | 1.6  | .5    | .0    | .0    | .0  | .0  | 2.2       |
| 3-4     | .0  | 1.2  | 1.1   | .0    | .0    | .0  | 2.2 | .0  | 2.2  | 1.1   | .0    | .0    | .0  | .0  | 3.3       |
| 5-6     | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .4   | .9    | .0    | .0    | .0  | .0  | 1.4       |
| 7       | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .3  | 4.4  | 1.8   | .0    | .0    | .0  | 6.5 | .1  | 6.4  | 2.5   | .0    | .0    | .0  | 9.1 | 96.2      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.5  | 8.7  | .0    | .0    | .0    | .0  | .0    | 16.2    |
| 1-2     | 2.1  | 25.7 | 8.3   | .0    | .0    | .0  | .0    | 36.1    |
| 3-4     | .4   | 12.4 | 17.8  | .0    | .0    | .0  | .0    | 30.7    |
| 5-6     | .0   | 2.1  | 9.5   | .4    | .0    | .0  | .0    | 12.0    |
| 7       | .0   | .0   | 2.1   | .0    | .0    | .0  | .0    | 2.1     |
| 8-9     | .0   | .0   | 1.2   | .0    | .0    | .0  | .0    | 1.2     |
| 10-11   | .0   | .0   | .0    | 1.2   | .0    | .0  | .0    | 1.2     |
| 12      | .0   | .0   | .0    | .4    | .0    | .0  | .0    | .4      |
| 13-16   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| TOT PCT | 10.0 | 49.0 | 39.0  | 2.1   | .0    | .0  | 100.0 | 241     |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

## PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 3.4 | 9.4  | 20.2 | 6.3  | 2.3  | .6  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 148      |
| 6-7          | .0  | 1.7  | 8.2  | 7.7  | 5.1  | 1.1 | .6    | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 88       |
| 8-9          | .0  | .3   | 2.0  | 3.7  | 4.0  | .6  | .3    | .9  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 41       |
| 10-11        | .0  | .6   | 1.4  | .6   | 2.6  | .3  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 19       |
| 12-13        | .0  | .0   | .9   | .0   | 1.1  | .3  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 8        |
| >13          | .0  | .0   | .0   | .6   | .0   | .0  | .0    | .3  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 3        |
| INDET        | 2.0 | 3.7  | 3.7  | 1.4  | .9   | .9  | .3    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 45       |
| TOTAL        | 19  | 55   | 128  | 71   | 56   | 13  | 4     | 4   | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 352      |
| PCT          | 5.4 | 15.6 | 36.4 | 20.2 | 15.9 | 3.7 | 1.1   | 1.1 | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



PERIOD: (PRIMARY) 1903-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0002 MADEIRA ISLANDS  
32.0N 16.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |  |
| N                  | 2.4  | 3.3       | .9   | .0        | .0   | .0              | .0   | 6.6             | 4.6            | .0                      | .0          | .0                  | .0         | .0                   | 88.8       |  |
| NE                 | 1.3  | 2.6       | .3   | .0        | .0   | .0              | .0   | 4.2             | 1.4            | .0                      | .6          | .0                  | .1         | .0                   | 93.7       |  |
| E                  | 2.1  | 8.5       | 2.5  | .0        | .0   | .0              | .0   | 13.1            | 1.3            | 1.7                     | .8          | .0                  | 1.3        | .0                   | 82.6       |  |
| SE                 | 1.7  | .6        | 3.5  | .0        | .0   | .0              | .0   | 5.8             | 2.9            | 7.0                     | 1.2         | .0                  | .0         | .0                   | 84.3       |  |
| S                  | 1.6  | 6.1       | 1.6  | .0        | .0   | .0              | .0   | 9.3             | 4.5            | 2.4                     | .0          | .0                  | .0         | .0                   | 83.8       |  |
| SW                 | 1.7  | 5.6       | .0   | .0        | .0   | .0              | .0   | 7.3             | 2.8            | 3.4                     | 1.7         | .0                  | .0         | .0                   | 85.4       |  |
| W                  | 2.2  | .7        | .0   | .0        | .0   | .0              | .0   | 2.9             | 8.3            | 2.2                     | .7          | .0                  | .0         | .0                   | 86.7       |  |
| NW                 | .0   | 4.8       | .0   | .0        | .0   | .0              | .0   | 4.8             | 5.8            | .0                      | 1.4         | .0                  | 1.4        | .0                   | 86.7       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | 3.7        | .0                   | 96.3       |  |
| TOT PCT            | 1.6  | 3.7       | .8   | .0        | .0   | .0              | .0   | 6.1             | 3.6            | 1.3                     | .7          | .0                  | .4         | .0                   | 88.3       |  |
| TOT OBS:           | 760  |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-----------------------|------------------|
|               | RAIN               | RAIN<br>SHMR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WU<br>PCPN | FGG WU<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST | NO<br>SIG<br>WEA |
| 00603         | 2.5                | 3.6          | .0   | .0           | .0   | .0                    | .0   | 6.3                     | 6.3               | 1.9          | 1.3               | .0                        | .6            | .0                    | 84.8             |
| 06009         | 2.3                | 3.2          | .9   | .0           | .0   | .0                    | .5   | 6.9                     | 3.7               | 2.3          | .9                | .0                        | .5            | .0                    | 86.6             |
| 12015         | 2.4                | 3.8          | .5   | .0           | .0   | .0                    | .0   | 6.7                     | 1.4               | 1.0          | .0                | .0                        | 1.0           | .0                    | 90.4             |
| 18021         | .9                 | 5.7          | 1.3  | .0           | .0   | .0                    | .0   | 7.8                     | 3.9               | 1.3          | 1.3               | .0                        | .0            | .0                    | 85.7             |
| TOT PCT       | 2.0                | 4.2          | .7   | .0           | .0   | .0                    | .1   | 7.0                     | 3.7               | 1.6          | .9                | .0                        | .5            | .0                    | 87.0             |
| TOT OBS:      | 813                |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 8.1  | 8.2   | 1.2   | .2    | .0  |      | 18.8      | 11.9     |          | 17.9       | 10.0  | 22.2  | 15.9  | 17.7  | 12.5  | 17.9  | 21.0  |
| NE       | 1.6                | 10.8 | 11.1  | 1.8   | .0    | .0  |      | 25.3      | 11.7     |          | 23.4       | 20.0  | 22.7  | 28.0  | 27.8  | 18.8  | 26.9  | 24.1  |
| E        | .8                 | 5.1  | 3.3   | .3    | .0    | .0  |      | 9.4       | 9.9      |          | 10.7       | .0    | 9.2   | 8.9   | 9.2   | .0    | 10.9  | 7.5   |
| SE       | .9                 | 2.9  | 1.2   | .4    | .0    | .0  |      | 5.5       | 9.9      |          | 4.9        | .0    | 4.2   | 6.5   | 6.8   | 8.3   | 5.4   | 5.4   |
| S        | .9                 | 3.1  | 2.0   | .5    | .0    | .0  |      | 6.5       | 10.5     |          | 7.2        | 15.0  | 5.9   | 5.6   | 6.9   | 8.3   | 5.9   | 6.7   |
| SW       | 1.0                | 5.8  | 3.2   | .6    | .1    | .0  |      | 10.7      | 10.4     |          | 10.1       | 20.0  | 10.5  | 10.9  | 9.2   | 10.7  | 11.8  | 11.8  |
| W        | .7                 | 3.6  | 3.3   | .8    | .2    | .0  |      | 8.5       | 12.5     |          | 8.9        | 5.0   | 7.1   | 8.8   | 9.2   | 25.0  | 8.9   | 7.8   |
| NW       | .9                 | 5.8  | 3.2   | 1.2   | .3    | .0  |      | 11.4      | 11.7     |          | 12.2       | 10.0  | 12.2  | 10.6  | 11.1  | 10.4  | 10.6  | 11.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.9                |      |       |       |       |     |      | 3.9       | .0       |          | 4.6        | 20.0  | 5.9   | 4.8   | 2.1   | .0    | 1.7   | 4.4   |
| TOT OBS  | 263                | 1004 | 786   | 151   | 20    | 0   | 2224 |           | 10.9     |          | 394        | 10    | 427   | 248   | 429   | 12    | 409   | 295   |
| TOT PCT  | 11.8               | 45.1 | 35.3  | 6.8   | .9    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 4.1                | 10.6 | 3.3   | .8    | .0  |           | 18.8     | 11.9     | 17.7       | 19.9  | 17.5  | 19.2  |
| NE       | 5.5                | 13.8 | 5.5   | .5    | .0  |           | 25.3     | 11.7     | 23.3       | 24.7  | 27.6  | 25.7  |
| E        | 2.9                | 5.2  | 1.2   | .1    | .0  |           | 9.4      | 9.9      | 10.4       | 9.1   | 9.0   | 9.5   |
| SE       | 2.0                | 2.5  | .9    | .1    | .0  |           | 5.5      | 9.9      | 4.8        | 3.0   | 6.9   | 5.4   |
| S        | 2.3                | 2.9  | 1.0   | .3    | .0  |           | 6.5      | 10.5     | 7.4        | 5.8   | 6.9   | 6.3   |
| SW       | 3.3                | 5.7  | 1.5   | .2    | .0  |           | 10.7     | 10.4     | 10.3       | 10.6  | 9.4   | 11.8  |
| W        | 2.1                | 3.9  | 1.9   | .6    | .0  |           | 8.5      | 12.5     | 8.8        | 7.7   | 9.6   | 8.4   |
| NW       | 3.4                | 5.3  | 2.1   | .6    | .0  |           | 11.4     | 11.7     | 12.2       | 11.6  | 11.1  | 10.9  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 3.9                |      |       |       |     |           | 3.9      | .0       | 5.0        | 5.5   | 2.0   | 2.8   |
| TOT OBS  | 656                | 1108 | 391   | 67    | 2   | 2224      |          | 10.9     | 404        | 675   | 441   | 704   |
| TOT PCT  | 29.5               | 49.8 | 17.6  | 3.0   | .1  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1903-1973  
(OVER-ALL) 1824-1973

OCTOBER

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | PCT<br>MEAN FREQ | TOTAL<br>OBS |
|-------|------|--------------------|------|-------|-------|-------|-----|------------------|--------------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |                  |              |
| 0000Z | 5.0  | 6.4                | 45.3 | 36.1  | 6.2   | 1.0   | .0  | 10.9             | 100.0        |
| 0600Z | 5.5  | 8.4                | 43.9 | 34.8  | 6.5   | .9    | .0  | 10.7             | 100.0        |
| 1200Z | 2.0  | 7.9                | 43.8 | 37.9  | 7.7   | .7    | .0  | 11.2             | 100.0        |
| 1800Z | 2.8  | 8.4                | 47.2 | 33.8  | 6.8   | 1.0   | .0  | 10.8             | 100.0        |
| TOT   | 86   | 177                | 1004 | 786   | 151   | 20    | 0   | 10.9             | 2224         |
| PCT   | 3.9  | 8.0                | 45.1 | 35.3  | 6.8   | .9    | .0  | 10.9             |              |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 4.5  | 7.4  | 7.0  | 2.5        | 4.4          |                        |
| NE       | 6.5  | 7.5  | 8.1  | 1.8        | 4.1          |                        |
| E        | 1.9  | 1.4  | 1.8  | 1.2        | 4.4          |                        |
| SE       | 1.3  | 1.8  | .8   | 1.5        | 4.6          |                        |
| S        | 2.6  | 1.0  | 2.6  | 2.8        | 4.9          |                        |
| SW       | 2.8  | 3.6  | 1.8  | 1.6        | 4.1          |                        |
| W        | 2.3  | 1.6  | 4.5  | .7         | 4.7          |                        |
| NW       | 2.7  | 3.6  | 3.5  | 1.1        | 3.9          |                        |
| VAR      | .0   | .0   | .0   | .0         | .0           |                        |
| CALM     | 2.3  | 1.2  | .8   | .2         | 2.6          |                        |
| TOT OBS  | 138  | 149  | 158  | 69         | 514          | 4.3                    |
| TOT PCT  | 26.8 | 29.0 | 30.7 | 13.4       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT; NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .2         | .0         | .0         | .5         | 2.0          | 1.9          | 1.1          | .7           | .0           | .0    | 14.9               |              |
| NE      | .0         | .0         | .2         | .6         | 2.9          | 1.8          | 1.7          | .2           | .2           | .0    | 16.3               |              |
| E       | .0         | .2         | .0         | .0         | .4           | 1.2          | .1           | .1           | .0           | .0    | 4.2                |              |
| SE      | .0         | .0         | .0         | .2         | .4           | .4           | *            | .2           | .2           | .2    | 3.7                |              |
| S       | .0         | .0         | .4         | .8         | .7           | 1.0          | .4           | .2           | .2           | .1    | 5.2                |              |
| SW      | .0         | .0         | .2         | .0         | .7           | .4           | .4           | .0           | .0           | *     | 8.0                |              |
| W       | .0         | .2         | .2         | .7         | 1.8          | .8           | .1           | .0           | .0           | .0    | 5.3                |              |
| NW      | .0         | .0         | .0         | .7         | 1.1          | .9           | .2           | .0           | .0           | .0    | 7.9                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .0         | .2           | .4           | .0           | .0           | .0           | .0    | 3.9                |              |
| TOT OBS | 1          | 2          | 5          | 18         | 53           | 45           | 21           | 7            | 3            | 2     | 357                | 514          |
| TOT PCT | .2         | .4         | 1.0        | 3.5        | 10.3         | 8.8          | 4.1          | 1.4          | .6           | .4    | 69.5               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .7          | 1.1        | 1.1        | 1.1        | 1.1          | 1.1          | 1.1           | 1.1        |
| = OR >5000        | 1.9         | 2.6        | 2.6        | 2.6        | 2.6          | 2.6          | 2.6           | 2.6        |
| = OR >3500        | 5.6         | 6.9        | 6.9        | 6.9        | 6.9          | 6.9          | 6.9           | 6.9        |
| = OR >2000        | 12.5        | 15.9       | 16.1       | 16.1       | 16.1         | 16.1         | 16.1          | 16.1       |
| = OR >1000        | 20.6        | 26.0       | 26.4       | 26.4       | 26.4         | 26.4         | 26.4          | 26.4       |
| = OR >600         | 22.7        | 29.4       | 29.8       | 30.0       | 30.0         | 30.0         | 30.0          | 30.0       |
| = OR >300         | 23.2        | 30.0       | 30.9       | 31.1       | 31.1         | 31.1         | 31.1          | 31.1       |
| = OR >150         | 23.2        | 30.3       | 31.3       | 31.5       | 31.5         | 31.5         | 31.5          | 31.5       |
| = OR >0           | 23.4        | 30.5       | 31.5       | 31.6       | 31.6         | 31.6         | 31.6          | 31.6       |
| TOTAL             | 125         | 163        | 168        | 169        | 169          | 169          | 169           | 169        |

TOTAL NUMBER OF OBS: 534

PCT FREQ NH <5/8: 68.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS | TOTAL<br>OBS |
|--|-----|------|------|------|------|-----|-----|-----|------|-----|--------------|
|  | 7.1 | 13.5 | 18.7 | 16.8 | 11.8 | 7.3 | 6.7 | 7.1 | 11.1 | .0  | 578          |

PERIOD: (PRIMARY) 1903-1973  
(OVER-ALL) 1854-1973

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32.6N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .1  | .1  | .0  | .0   | .1  | .0  | .0  | .0   | .0    | .3           |
|              | TOT %  | .0   | .0   | .1  | .1  | .0  | .0   | .1  | .0  | .0  | .0   | .0    | .3           |
| 1/2<1        | PCP    | .1   | .1   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .1           |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .2   | .1  | .1  | .0  | .0   | .0    | .4           |
|              | TOT %  | .1   | .1   | .0  | .0  | .0  | .2   | .1  | .1  | .0  | .0   | .0    | .5           |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0  | .1  | .3   | .0  | .1  | .0  | .0   | .0    | .5           |
|              | TOT %  | .0   | .0   | .0  | .0  | .1  | .3   | .0  | .1  | .0  | .0   | .0    | .5           |
| 2<5          | PCP    | .0   | .0   | .0  | .0  | .3  | .3   | .0  | .0  | .0  | .0   | .0    | .5           |
|              | NO PCP | .1   | .0   | .0  | .1  | .1  | .1   | .2  | .0  | .0  | .0   | .0    | .5           |
|              | TOT %  | .1   | .0   | .0  | .1  | .3  | .3   | .2  | .0  | .0  | .0   | .0    | 1.1          |
| 5<10         | PCP    | 1.0  | .7   | .9  | .2  | .4  | .5   | .2  | .3  | .0  | .0   | .0    | 4.1          |
|              | NO PCP | 5.3  | 6.1  | 2.6 | 1.2 | 2.1 | 3.7  | 2.4 | 2.0 | .0  | .3   | .3    | 25.6         |
|              | TOT %  | 6.3  | 6.8  | 3.5 | 1.4 | 2.5 | 4.1  | 2.6 | 2.3 | .0  | .3   | .3    | 29.7         |
| 10+          | PCP    | .3   | .2   | .1  | .1  | .1  | .1   | .1  | .2  | .0  | .0   | .0    | 1.3          |
|              | NO PCP | 13.9 | 16.4 | 4.1 | 4.0 | 5.1 | 6.6  | 6.1 | 6.9 | .0  | 3.3  | .3    | 66.6         |
|              | TOT %  | 14.2 | 16.6 | 4.3 | 4.2 | 5.3 | 6.8  | 6.2 | 7.1 | .0  | 3.3  | .3    | 67.9         |
| TOT OBS      |        |      |      |     |     |     |      |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |      |     |     |     |      |       |              |
|              |        | 20.7 | 23.5 | 7.8 | 5.7 | 8.2 | 11.8 | 9.2 | 9.6 | .0  | 3.6  | 100.0 | 757          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW   | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|------|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | *   | *   | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0   | .1  | .0  | .0  | .0   | .0    | .1           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | *   | *   | .0  | .0   | .1  | .0  | .0  | .0   | .0    | .2           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | *    | *    | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .1   | *   | .1  | .0  | .0   | .0    | .2           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | *    | *    | .0  | .0  | .0  | .1   | *   | .1  | .0  | .0   | .0    | .3           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .0   | .0  | .0  | .1  | .0   | .0  | .1  | .0  | .0   | .0    | .2           |
|              | 22+        | .0   | .0   | .0  | .0  | *   | .4   | .1  | .0  | .0  | .0   | .0    | .5           |
|              | TOT %      | .0   | .0   | .0  | .0  | .1  | .4   | .1  | .1  | .0  | .0   | .0    | .6           |
| 2<5          | 0-3        | .0   | .0   | *   | *   | .0  | .0   | .0  | .0  | .0  | .0   | .0    | .1           |
|              | 4-10       | .0   | .0   | .0  | .0  | .1  | .2   | .2  | .0  | .0  | .0   | .0    | .4           |
|              | 11-21      | .1   | *    | .0  | *   | .8  | .2   | .1  | .0  | .0  | .0   | .0    | .8           |
|              | 22+        | *    | *    | .0  | .0  | .0  | .1   | .1  | .0  | .0  | .0   | .0    | .2           |
|              | TOT %      | .2   | .1   | *   | .1  | .4  | .4   | .4  | .0  | .0  | .0   | .0    | 1.5          |
| 5<10         | 0-3        | .3   | .2   | .2  | .1  | .2  | .1   | .1  | .4  | .0  | .3   | .3    | 2.0          |
|              | 4-10       | 1.7  | 2.1  | .9  | .3  | .5  | 1.5  | 1.0 | 1.0 | .0  | .0   | .0    | 9.0          |
|              | 11-21      | 2.0  | 2.5  | 1.3 | .4  | 1.1 | 1.2  | .4  | .4  | .0  | .0   | .0    | 9.3          |
|              | 22+        | .4   | .6   | *   | .3  | .5  | .3   | .3  | .3  | .0  | .0   | .0    | 2.7          |
|              | TOT %      | 4.3  | 5.5  | 2.4 | 1.2 | 2.3 | 3.1  | 1.8 | 2.1 | .0  | .3   | .3    | 23.0         |
| 10+          | 0-3        | 1.0  | 1.4  | .3  | .6  | .5  | .8   | .7  | .7  | .0  | 3.6  | .4    | 9.4          |
|              | 4-10       | 7.1  | 8.4  | 3.9 | 2.3 | 2.4 | 3.5  | 3.0 | 4.1 | .0  | .0   | .0    | 34.8         |
|              | 11-21      | 7.2  | 9.4  | 2.0 | .7  | 1.6 | 2.0  | 2.2 | 2.1 | .0  | .0   | .0    | 27.1         |
|              | 22+        | .6   | .9   | .1  | .3  | .2  | .1   | .3  | .5  | .0  | .0   | .0    | 3.0          |
|              | TOT %      | 15.9 | 20.0 | 6.4 | 3.9 | 4.7 | 6.4  | 6.2 | 7.3 | .0  | 3.6  | .4    | 74.4         |
| TOT OBS      |            |      |      |     |     |     |      |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |      |     |     |     |      |       |              |
|              |            | 20.4 | 25.7 | 8.9 | 5.2 | 7.5 | 10.4 | 8.6 | 9.6 | .0  | 3.9  | 100.0 | 1260         |



PERIOD: (PRIMARY) 1903-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+   | TOTAL       | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|---------|-------------|--------------------|--------------|
| 00003         | .0         | .0         | .0         | 2.6        | 8.5          | 15.4         | 4.3          | .9           | .0           | .9      | 32.5        | 67.5               | 117          |
| 06009         | .0         | .0         | .0         | 4.1        | 12.2         | 9.8          | 2.4          | 1.6          | .8           | .0      | 30.9        | 69.1               | 123          |
| 12015         | .6         | 1.3        | 1.9        | 3.1        | 9.4          | 4.4          | 5.0          | 2.5          | .0           | .6      | 28.8        | 71.3               | 160          |
| 18021         | .0         | .0         | 1.8        | 3.7        | 9.2          | 8.0          | 4.3          | .6           | 1.2          | .6      | 30.1        | 69.9               | 163          |
| TOT<br>PCT    | 1<br>.2    | 2<br>.4    | 6<br>1.1   | 19<br>3.4  | 55<br>9.8    | 51<br>9.1    | 23<br>4.1    | 8<br>1.4     | 3<br>.5      | 3<br>.5 | 171<br>30.4 | 392<br>69.6        | 563<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2    | 1/2<1   | 1<2     | 2<5       | 5<10        | 10+         | TOTAL<br>OBS  |
|---------------|---------|---------|---------|-----------|-------------|-------------|---------------|
| 00003         | .4      | .4      | .4      | 1.6       | 22.9        | 74.4        | 258           |
| 06009         | .0      | .6      | .8      | 1.1       | 27.5        | 70.0        | 360           |
| 12015         | .0      | .0      | 1.0     | 1.4       | 21.0        | 76.6        | 295           |
| 18021         | .3      | .3      | .3      | 2.0       | 21.5        | 75.8        | 400           |
| TOT<br>PCT    | 2<br>.2 | 4<br>.3 | 8<br>.6 | 20<br>1.5 | 306<br>23.3 | 973<br>74.1 | 1313<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .0            | .0         | 3.7         | 30.8            | 65.4              | 107          |
| 06009         | .0            | .0         | 5.2         | 27.0            | 67.8              | 115          |
| 12015         | .6            | 3.9        | 7.1         | 22.7            | 70.1              | 154          |
| 18021         | .0            | 1.9        | 5.7         | 25.3            | 69.0              | 158          |
| TOT<br>PCT    | 1<br>.2       | 9<br>1.7   | 30<br>5.6   | 139<br>26.0     | 365<br>68.4       | 534<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .2    | 3.2   | 3.4   | 2.3   | .6     | 51           | 9.7         |
| 70/74  | .0   | .0    | .0    | 1.7   | 12.1  | 19.2  | 20.1  | 13.9   | 353          | 67.0        |
| 65/69  | .0   | .0    | .0    | .9    | 3.4   | 5.1   | 8.2   | 4.2    | 115          | 21.8        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .6    | .8     | 7            | 1.3         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .2    | .0     | 1            | .2          |
| TOTAL  | 0    | 0     | 0     | 15    | 99    | 146   | 165   | 102    | 527          | 100.0       |
| PCT    | .0   | .0    | .0    | 2.8   | 18.8  | 27.7  | 31.3  | 19.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW   | W    | NW  | VAR | CALM |
|------|------|-----|-----|-----|------|------|-----|-----|------|
| 1.5  | 2.4  | .9  | 1.0 | .3  | 1.6  | .9   | .9  | .0  | .2   |
| 13.3 | 14.7 | 5.5 | 4.1 | 5.7 | 8.1  | 6.5  | 5.3 | .0  | 3.8  |
| 6.9  | 4.7  | 1.5 | .5  | 1.5 | 1.1  | 2.3  | 2.4 | .0  | .9   |
| .5   | .5   | .0  | .0  | .2  | .0   | .2   | .0  | .0  | .0   |
| .0   | .0   | .0  | .0  | .0  | .0   | .2   | .0  | .0  | .0   |
| 22.1 | 22.2 | 7.9 | 5.6 | 7.7 | 10.8 | 10.1 | 8.6 | .0  | 4.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 77  | 75  | 73  | 70  | 66 | 64 | 61  | 69.7 | 414          |
| 06009         | 77  | 74  | 73  | 70  | 65 | 63 | 58  | 69.5 | 678          |
| 12015         | 80  | 79  | 77  | 72  | 67 | 65 | 64  | 72.2 | 498          |
| 18021         | 80  | 79  | 76  | 71  | 66 | 62 | 59  | 71.0 | 704          |
| TOT           | 80  | 78  | 75  | 71  | 66 | 64 | 58  | 70.6 | 2234         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 3.5   | 10.4  | 22.6  | 38.3  | 25.2  | 81    | 115    |      |              |
| 06009         | .0   | 2.7   | 12.9  | 24.5  | 32.7  | 27.2  | 81    | 147    |      |              |
| 12015         | .0   | 4.2   | 24.2  | 34.5  | 24.8  | 12.1  | 76    | 165    |      |              |
| 18021         | .0   | 2.9   | 23.4  | 27.7  | 30.7  | 15.3  | 78    | 137    |      |              |
| TOT           | 0    | 19    | 103   | 157   | 175   | 110   | 79    | 564    |      |              |

PERIOD: (PRIMARY) 1903-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | 1     | .0       | .1        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .4       | 4     | .0       | .5        |
| 6                  | .0       | .0       | .0       | .0       | .3       | .4       | 5     | .0       | .7        |
| 5                  | .0       | .0       | .0       | .1       | .8       | .4       | 10    | .0       | 1.4       |
| 4                  | .0       | .0       | .0       | .4       | .8       | .0       | 9     | .0       | 1.2       |
| 3                  | .0       | .0       | .0       | .4       | 1.5      | .5       | 18    | .0       | 2.4       |
| 2                  | .0       | .0       | .0       | 1.6      | 3.4      | .5       | 41    | .1       | 5.4       |
| 1                  | .0       | .0       | .0       | 2.4      | 5.4      | .0       | 58    | .0       | 7.9       |
| 0                  | .0       | .0       | .3       | 11.7     | 5.6      | .0       | 129   | .1       | 17.4      |
| -1                 | .0       | .0       | 1.6      | 13.3     | 2.2      | .0       | 126   | .1       | 17.0      |
| -2                 | .0       | .0       | 2.7      | 11.7     | 1.6      | .1       | 119   | .4       | 15.7      |
| -3                 | .0       | .0       | 4.5      | 8.1      | .5       | .0       | 97    | .1       | 13.0      |
| -4                 | .0       | .1       | 3.3      | 3.8      | .4       | .0       | 56    | .0       | 7.6       |
| -5                 | .0       | .3       | 1.6      | 1.9      | .1       | .0       | 29    | .0       | 3.9       |
| -6                 | .0       | .1       | 1.4      | .5       | .0       | .0       | 15    | .0       | 2.0       |
| -7/-8              | .0       | .5       | .8       | .7       | .0       | .0       | 15    | .0       | 2.0       |
| -9/-10             | .1       | .1       | .0       | .0       | .0       | .0       | 2     | .0       | .3        |
| -11/-13            | .0       | .0       | .4       | .0       | .0       | .0       | 3     | .0       | .4        |
| TOTAL              | 1        | 9        | 122      | 168      | 19       | 737      | 7     | 730      |           |
| PCT                | .1       | 1.2      | 16.6     | 56.7     | 22.8     | 2.6      | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |  | PCT  | NE  |      |       |       |       |     |  | PCT  |
|---------|-----|------|-------|-------|-------|-----|--|------|-----|------|-------|-------|-------|-----|--|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |
| <1      | .6  | 1.2  | .0    | .0    | .0    | .0  |  | 1.8  | .0  | .5   | .0    | .0    | .0    | .0  |  | .5   |
| 1-2     | .3  | 5.1  | 2.6   | .0    | .0    | .0  |  | 8.1  | .3  | 6.2  | 1.4   | .0    | .0    | .0  |  | 8.0  |
| 3-4     | .0  | .8   | 5.3   | .0    | .0    | .0  |  | 6.2  | .0  | 3.1  | 4.8   | .0    | .0    | .0  |  | 8.0  |
| 5-6     | .0  | .3   | 3.4   | .3    | .0    | .0  |  | 4.0  | .0  | .0   | 4.2   | .1    | .0    | .0  |  | 4.3  |
| 7       | .0  | .0   | 2.9   | .0    | .0    | .0  |  | 2.9  | .0  | .3   | .8    | .0    | .0    | .0  |  | 1.2  |
| 8-9     | .0  | .0   | .0    | .5    | .0    | .0  |  | .5   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 13-16   | .0  | .0   | .0    | .3    | .6    | .0  |  | .8   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| TOT PCT | .9  | 7.5  | 14.2  | 1.0   | .6    | .0  |  | 24.2 | .3  | 10.2 | 11.4  | .1    | .0    | .0  |  | 21.9 |

| HGT     | E   |      |       |       |       |     |  | PCT | SE  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .0  | .3   | .0    | .0    | .0    | .0  |  | .3  | .1  | .7   | .0    | .0    | .0    | .0  |  | .8  |
| 1-2     | .3  | 1.4  | .3    | .0    | .0    | .0  |  | 1.9 | .0  | .7   | .8    | .0    | .0    | .0  |  | 1.4 |
| 3-4     | .0  | .3   | 1.3   | .0    | .0    | .0  |  | 1.6 | .0  | 1.4  | .3    | .3    | .0    | .0  |  | 2.0 |
| 5-6     | .0  | .0   | .5    | .0    | .0    | .0  |  | .5  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 7       | .0  | .0   | .3    | .0    | .0    | .0  |  | .3  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .3    | .0    | .0  |  | .3  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .3  | 2.0  | 2.3   | .0    | .0    | .0  |  | 4.7 | .1  | 2.8  | 1.0   | .7    | .0    | .0  |  | 4.6 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .0   | .0    | .0    | .0    | .0  | .3  | .1  | .0   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .3  | 1.6  | .7    | .0    | .0    | .0  | 2.6 | .3  | 1.9  | .8    | .0    | .0    | .0  | 3.0 |
| 3-4     | .0  | 2.1  | 1.5   | .0    | .0    | .0  | 3.6 | .0  | 1.9  | 2.4   | .0    | .0    | .0  | 4.3 |
| 5-6     | .0  | .0   | 1.0   | .0    | .0    | .0  | 1.0 | .0  | .3   | .3    | .1    | .0    | .0  | .8  |
| 7       | .0  | .0   | .7    | .3    | .3    | .0  | 1.4 | .0  | .0   | .3    | .0    | .0    | .0  | .3  |
| 8-9     | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .0    | .3    | .0    | .0  | .3  |
| 10-11   | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0   | .3    | .0    | .0    | .0  | .3  |
| 12      | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .6  | 3.7  | 4.2   | 1.0   | .3    | .0  | 9.9 | .4  | 4.2  | 4.2   | .4    | .0    | .0  | 9.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .6  | .9   | .3    | .0    | .0    | .0  | 1.9 | .1  | .4   | .0    | .0    | .0    | .0  | .5   |           |
| 1-2     | .0  | 1.8  | 1.3   | .0    | .0    | .0  | 3.1 | .0  | 1.4  | .0    | .0    | .0    | .0  | 1.4  |           |
| 3-4     | .0  | 1.2  | 1.3   | .0    | .0    | .0  | 2.5 | .3  | 2.5  | 2.8   | .0    | .0    | .0  | 5.7  |           |
| 5-6     | .0  | .0   | .0    | .6    | .0    | .0  | .6  | .0  | .0   | 1.4   | .0    | .0    | .0  | 1.4  |           |
| 7       | .0  | .0   | .6    | .0    | .0    | .0  | .6  | .0  | .0   | .2    | .3    | .0    | .0  | .5   |           |
| 8-9     | .0  | .0   | .0    | 1.0   | .0    | .0  | 1.0 | .0  | .0   | .3    | .2    | .0    | .0  | .5   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .4    | .1    | .0  | .5   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .6  | 3.9  | 3.5   | 1.6   | .0    | .0  | 9.6 | .4  | 4.4  | 4.7   | .9    | .1    | .0  | 10.5 | 94.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.6 | 4.6  | .3    | .0    | .0    | .0  | 12.6  |         |
| 1-2     | 2.0 | 19.9 | 7.6   | .0    | .0    | .0  | 29.5  |         |
| 3-4     | .3  | 13.6 | 19.2  | .3    | .0    | .0  | 33.4  |         |
| 5-6     | .0  | .7   | 10.6  | 1.0   | .0    | .0  | 12.3  |         |
| 7       | .0  | .3   | 5.7   | .3    | .0    | .0  | 7.0   |         |
| 8-9     | .0  | .0   | .3    | 2.3   | .0    | .0  | 2.6   |         |
| 10-11   | .0  | .0   | .7    | .3    | .0    | .0  | 1.0   |         |
| 12      | .0  | .0   | .0    | .3    | .0    | .0  | .3    |         |
| 13-16   | .0  | .0   | .0    | .7    | .7    | .0  | 1.3   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 9.9 | 39.1 | 44.4  | 5.6   | 1.0   | .0  | 100.0 | 302     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 8.2  | 16.5 | 5.4  | .4   | .6  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 154   | 3        |
| 6-7          | .0  | 1.5  | 6.0  | 7.1  | 7.7  | 1.3 | 1.3   | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 116   | 5        |
| 8-9          | .0  | .2   | 2.1  | 3.2  | 4.1  | 2.4 | 1.7   | .4  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 66    | 7        |
| 10-11        | .0  | .0   | .6   | 2.8  | 1.5  | 1.1 | .4    | .2  | .4    | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 35    | 7        |
| 12-13        | .0  | .0   | .4   | .6   | .4   | .9  | .4    | .2  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 17    | 8        |
| >13          | .0  | .0   | .0   | .4   | .4   | .4  | .4    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 13    | 9        |
| INDET        | 3.2 | 1.7  | 2.6  | 2.4  | 1.5  | 1.1 | .4    | .0  | .9    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 65    | 4        |
| TOTAL        | 24  | 54   | 132  | 102  | 75   | 36  | 75    | 5   | 10    | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 466   | 4        |
| PCT          | 5.2 | 11.6 | 28.3 | 21.9 | 16.1 | 7.7 | 5.4   | 1.1 | 2.1   | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0002 MADEIRA ISLANDS  
32.0N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |           |                 |            |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FGD WU PCPN | FGD WU PCPN PAST HR | SMOKE HAZE | BLWG DUST | SPRAY BLWG SNOW | NO SIG WEA |
| N                  | 3.3  | 7.7       | .4   | .0        | .0   | .0             | .0   | 11.4            | 5.2            | .6                      | .0          | .0                  | .8         | .0        | .0              | 81.9       |
| NE                 | 1.3  | 5.6       | 2.3  | .0        | .0   | .0             | .0   | 9.3             | 1.5            | 1.5                     | .7          | .7                  | .0         | .0        | .0              | 86.4       |
| E                  | .8   | 7.6       | .0   | .0        | .0   | .0             | .0   | 8.4             | 1.6            | .0                      | .0          | .0                  | .0         | .0        | .0              | 90.0       |
| SE                 | .9   | 6.3       | 3.6  | .0        | .0   | .0             | .0   | 10.7            | .9             | 3.6                     | .0          | .0                  | .0         | .0        | .0              | 84.8       |
| S                  | 5.7  | 6.3       | 2.5  | .0        | .0   | .0             | .0   | 14.5            | 4.4            | 2.5                     | .0          | .0                  | 1.9        | .0        | .0              | 76.7       |
| SW                 | 2.1  | 5.2       | 2.1  | .0        | .0   | .0             | .0   | 9.3             | 3.1            | 1.0                     | 2.1         | .0                  | .5         | 2.1       | .0              | 83.0       |
| W                  | 6.0  | 9.4       | 1.3  | .0        | .0   | .0             | .0   | 16.8            | 6.0            | 2.0                     | 1.3         | .0                  | .0         | .0        | .0              | 74.5       |
| NW                 | .7   | 7.5       | .0   | .0        | .0   | .0             | .0   | 8.1             | 7.2            | .0                      | 1.3         | .0                  | .0         | .0        | .0              | 83.4       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0        | .0              | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0        | .0              | 100.0      |
| TOT PCT            | 2.5  | 6.9       | 1.3  | .0        | .0   | .0             | .0   | 10.6            | 3.8            | 1.1                     | .7          | .2                  | .3         | .2        | .2              | 83.3       |
| TOT OBS:           | 612  |           |      |           |      |                |      |                 |                |                         |             |                     |            |           |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                        |                       |                  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|------------------------|-----------------------|------------------|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | BLWG DUST<br>BLWG SNOW | SPRAY<br>DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003               | .9                 | 7.0          | .9   | .0           | .0   | .0                    | .0   | 8.7                     | 1.7               | 4.3          | .9             | .0                        | .0            | .0                     | .0                    | 84.3             |
| 06009               | 2.9                | 6.9          | 2.9  | .0           | .0   | .0                    | .0   | 12.6                    | 2.3               | 1.1          | .6             | .6                        | .0            | .0                     | .0                    | 83.3             |
| 12015               | 2.4                | 5.9          | 1.2  | .0           | .0   | .0                    | .0   | 9.4                     | 4.7               | .0           | .6             | .0                        | .6            | .0                     | .0                    | 84.7             |
| 18021               | 2.9                | 6.9          | .0   | .0           | .0   | .0                    | .0   | 9.8                     | 5.2               | .0           | .6             | .0                        | .6            | .6                     | .6                    | 83.3             |
| TOT PCT<br>TOT OBS: | 2.4<br>633         | 6.6          | 1.3  | .0           | .0   | .0                    | .0   | 10.3                    | 3.6               | 1.1          | .6             | .2                        | .3            | .2                     | .2                    | 83.9             |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |     |  |  |
|----------|--------------------|------|-------|-------|-------|----|------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-----|--|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21  |  |  |
| N        | 1.0                | 7.8  | 5.6   | 1.6   | .1    | .0 | 16.1 | 11.7  | 13.9         | 15.0        | 13.9        | 18.4       | 15.8  | 50.0  | 15.7  | 21.7  |     |  |  |
| NE       | 1.1                | 9.5  | 11.5  | 2.2   | .3    | .0 | 24.7 | 12.5  | 26.8         | 5.0         | 23.4        | 24.0       | 24.2  | .0    | 24.5  | 25.8  |     |  |  |
| E        | .9                 | 5.5  | 4.4   | .7    | .1    | .0 | 11.5 | 11.2  | 13.2         | 20.0        | 13.5        | 9.7        | 10.8  | .0    | 11.8  | 8.4   |     |  |  |
| SE       | .8                 | 3.4  | 2.1   | .6    | .0    | .0 | 6.9  | 10.6  | 7.4          | 20.0        | 5.8         | 8.6        | 6.4   | .0    | 6.7   | 7.5   |     |  |  |
| S        | .4                 | 3.1  | 1.6   | .8    | .0    | .0 | 6.0  | 11.7  | 5.6          | .0          | 6.2         | 7.4        | 6.5   | .0    | 6.8   | 3.1   |     |  |  |
| SW       | .4                 | 2.8  | 2.6   | 1.0   | .1    | .0 | 6.9  | 13.1  | 6.3          | .0          | 9.3         | 5.0        | 7.8   | .0    | 7.9   | 3.5   |     |  |  |
| W        | .7                 | 4.1  | 5.1   | 1.5   | .2    | .0 | 11.6 | 13.3  | 12.5         | 20.0        | 10.9        | 9.7        | 12.0  | .0    | 11.2  | 12.8  |     |  |  |
| NW       | .6                 | 4.5  | 6.3   | 1.7   | .6    | .0 | 13.7 | 14.4  | 11.4         | 20.0        | 14.2        | 14.6       | 14.3  | 50.0  | 13.4  | 14.5  |     |  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 | .0   | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    |     |  |  |
| CALM     | 2.5                |      |       |       |       |    | 2.5  | .0    | 2.9          | .0          | 2.8         | 2.7        | 2.2   | .0    | 2.0   | 2.7   |     |  |  |
| TOT OBS  | 158                | 756  | 730   | 190   | 25    | 0  | 1859 |       | 12.1         | 341         | 5           | 354        | 222   | 366   | 2     | 343   | 226 |  |  |
| TOT PCT  | 8.5                | 40.7 | 39.3  | 10.2  | 1.3   | .0 |      | 100.0 |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 |     |  |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|----|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 09    | 15 | 18 |
| N        | 4.0                | 8.4  | 3.1   | .5    | .0  | 16.1      | 11.7     | 13.9     | 15.6       | 16.0  | 18.1  |    |    |
| NE       | 4.7                | 13.4 | 6.2   | .4    | .1  | 24.7      | 12.5     | 26.8     | 23.6       | 24.1  | 25.0  |    |    |
| E        | 3.0                | 6.2  | 2.0   | .3    | .0  | 11.5      | 11.2     | 13.2     | 12.0       | 10.7  | 10.5  |    |    |
| SE       | 1.9                | 3.8  | 1.1   | .1    | .0  | 6.9       | 10.6     | 7.4      | 6.9        | 6.3   | 7.0   |    |    |
| S        | 1.5                | 3.2  | 1.2   | .2    | .0  | 6.0       | 11.7     | 5.6      | 6.7        | 6.5   | 5.3   |    |    |
| SW       | 1.6                | 2.8  | 2.3   | .1    | .1  | 6.9       | 13.1     | 6.2      | 7.6        | 7.7   | 6.2   |    |    |
| W        | 2.4                | 5.5  | 2.8   | .8    | .1  | 11.6      | 13.3     | 12.6     | 10.5       | 12.0  | 11.8  |    |    |
| NW       | 2.4                | 6.2  | 3.9   | 1.0   | .2  | 13.7      | 14.4     | 11.5     | 14.4       | 14.5  | 13.8  |    |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       | .0       | .0         | .0    | .0    |    |    |
| CALM     | 2.5                |      |       |       |     | 2.5       | .0       | 2.9      | 2.8        | 2.2   | 2.3   |    |    |
| TOT OBS  | 450                | 919  | 420   | 64    | 6   | 1859      |          | 12.1     | 346        | 576   | 569   |    |    |
| TOT PCT  | 24.2               | 49.4 | 22.6  | 3.4   | .3  | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |    |    |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000 | 2.9  | 5.2 | 42.2 | 37.9               | 10.7  | 1.2   | .0  | 12.1 | 100.0    | 346       |
| 0600 | 2.8  | 6.1 | 41.8 | 35.9               | 11.6  | 1.7   | .0  | 12.2 | 100.0    | 576       |
| 1200 | 2.2  | 6.5 | 38.0 | 41.3               | 10.3  | 1.6   | .0  | 12.4 | 100.0    | 368       |
| 1800 | 2.3  | 6.0 | 40.2 | 42.2               | 8.4   | .9    | .0  | 11.8 | 100.0    | 569       |
| TOT  | 47   | 111 | 756  | 730                | 190   | 25    | 0   | 12.1 |          | 1859      |
| PCT  | 2.5  | 6.0 | 40.7 | 39.3               | 10.2  | 1.3   | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS'D | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 2.6  | 5.1  | 7.0  | 2.9          |              | 5.0                    |
| NE       | 3.4  | 5.6  | 11.2 | 3.6          |              | 5.0                    |
| E        | 3.4  | 2.1  | 4.6  | 1.1          |              | 4.2                    |
| SE       | .3   | .4   | 3.1  | 1.1          |              | 5.8                    |
| S        | .9   | 1.1  | 2.3  | 2.4          |              | 5.9                    |
| SW       | 2.0  | 2.1  | 3.6  | 1.3          |              | 4.6                    |
| W        | 1.8  | 2.9  | 7.4  | 1.8          |              | 5.2                    |
| NW       | 1.8  | 2.4  | 4.9  | 1.8          |              | 4.9                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.0  | .5   | .5   | .0           |              | 2.8                    |
| TOT OBS  | 69   | 89   | 178  | 64           | 400          | 5.0                    |
| TOT PCT  | 17.3 | 22.3 | 44.5 | 16.0         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION |     |     |     |      |      |      |      |      |       |         |       |       |
|---|-----|-----|-----|------|------|------|------|------|-------|---------|-------|-------|
| 000   | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |       |
| 149   | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |       |
| .0  | .0  | .4  | 1.6 | 3.7  | 1.8  | .4   | .5   | .0   | .0    | 9.3     |       |       |
| .0  | .0  | .8  | .7  | 3.2  | 2.8  | 1.6  | 1.2  | .5   | .0    | 13.1    |       |       |
| .0  | .0  | .0  | .4  | .9   | 1.3  | 1.0  | .4   | .0   | .0    | 7.3     |       |       |
| .0  | .0  | .1  | .1  | .4   | .7   | .3   | .3   | .0   | .0    | 2.9     |       |       |
| .0  | .0  | .2  | .4  | .8   | 1.3  | .5   | .3   | .0   | .3    | 3.1     |       |       |
| .3  | .0  | .1  | .3  | .7   | .9   | .4   | .3   | .0   | .0    | 6.2     |       |       |
| .3  | .0  | .2  | 1.3 | .9   | 1.8  | 1.0  | .3   | .0   | .0    | 8.3     |       |       |
| .0  | .0  | .1  | 2.1 | 1.7  | .8   | .4   | .1   | .0   | .0    | 5.7     |       |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | 2.0     |       |       |
| 2   | 0   | 7   | 27  | 49   | 45   | 22   | 13   | 3    | 1     | 231     |       | 400   |
| .5  | .0  | 1.8 | 6.8 | 12.3 | 11.3 | 5.5  | 3.3  | .8   | .3    | 57.8    |       | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .7        | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  |
| >5000             | 3.5       | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  | 4.0   | 4.0  |
| >3500             | 7.7       | 9.2  | 9.5  | 9.5  | 9.5  | 9.5  | 9.5   | 9.5  |
| >2000             | 15.7      | 19.7 | 20.4 | 20.4 | 20.4 | 20.4 | 20.4  | 20.4 |
| >1000             | 25.9      | 31.4 | 32.4 | 32.4 | 32.7 | 32.7 | 32.7  | 32.7 |
| >600              | 30.4      | 37.7 | 39.2 | 39.2 | 39.4 | 39.4 | 39.4  | 39.4 |
| >300              | 31.7      | 39.4 | 40.9 | 40.9 | 41.1 | 41.1 | 41.1  | 41.1 |
| >150              | 31.7      | 39.4 | 40.9 | 40.9 | 41.1 | 41.1 | 41.1  | 41.1 |
| >0                | 31.7      | 39.9 | 41.4 | 41.4 | 41.6 | 41.6 | 41.6  | 41.6 |
| TOTAL             | 127       | 160  | 166  | 166  | 167  | 167  | 167   | 167  |

TOTAL NUMBER OF OBS: 401

PCT FREQ NH <5/8: 58.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1   | 2    | 3    | 4    | 5   | 6    | 7    | 8    | OBS'D | TOTAL<br>OBS |
|-----|-----|------|------|------|-----|------|------|------|-------|--------------|
| 6.9 | 9.0 | 14.3 | 14.7 | 12.2 | 7.6 | 12.4 | 11.5 | 11.3 | .0    | 434          |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

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32.0N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |     |
|--------------|--------|------|------|------|-----|-----|-----|------|------|-----|------|-------|--------------|-----|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
| 1/2<1        | PCP    | .2   | .2   | .2   | *   | .1  | .0  | .0   | .0   | .0  | .0   | .7    |              |     |
|              | NO PCP | .0   | .2   | .0   | .0  | .0  | .2  | .0   | .0   | .0  | .0   | .3    |              |     |
|              | TOT %  | .2   | .3   | .2   | *   | .1  | .2  | .0   | .0   | .0  | .0   | 1.0   |              |     |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|              | NO PCP | .2   | .0   | .0   | .0  | .0  | *   | .1   | .2   | .0  | .0   | .5    |              |     |
|              | TOT %  | .2   | .0   | .0   | .0  | .0  | *   | .1   | .2   | .0  | .0   | .5    |              |     |
| 2<5          | PCP    | .0   | .2   | .0   | .0  | .0  | .0  | .0   | .2   | .0  | .0   | .3    |              |     |
|              | NO PCP | .2   | .2   | .0   | .2  | .2  | .2  | .2   | .2   | .0  | .2   | 1.3   |              |     |
|              | TOT %  | .2   | .3   | .0   | .2  | .2  | .2  | .2   | .3   | .0  | .2   | 1.6   |              |     |
| 5<10         | PCP    | 1.6  | 1.2  | .5   | .5  | .5  | .6  | 1.4  | .6   | .0  | .0   | 6.9   |              |     |
|              | NO PCP | 5.9  | 5.8  | 2.1  | .5  | 1.0 | 1.7 | 2.0  | 3.9  | .0  | .3   | 23.4  |              |     |
|              | TOT %  | 7.5  | 7.0  | 2.7  | 1.0 | 1.5 | 2.3 | 3.4  | 4.5  | .0  | .3   | 30.3  |              |     |
| 10+          | PCP    | .5   | .7   | .2   | .0  | .3  | .2  | .7   | .2   | .0  | .0   | 2.8   |              |     |
|              | NO PCP | 11.2 | 16.1 | 7.3  | 3.4 | 4.4 | 5.1 | 7.7  | 7.3  | .0  | 1.3  | 63.8  |              |     |
|              | TOT %  | 11.7 | 16.8 | 7.5  | 3.4 | 4.8 | 5.3 | 8.3  | 7.5  | .0  | 1.3  | 66.6  |              |     |
| TOT OBS      |        |      |      |      |     |     |     |      |      |     |      |       |              | 610 |
| TOT PCT      |        | 19.7 | 24.5 | 10.3 | 4.6 | 6.5 | 8.0 | 12.0 | 12.6 | .0  | 1.8  | 100.0 |              |     |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| SBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |     |
|-------------|------------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|-----|
| <1/2        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | TOT %      | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
| 1/2<1       | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | 4-10       | .1   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .1    |              |     |
|             | 11-21      | .0   | .2   | .1  | .0  | .0  | .1  | .1   | .0   | .0  | .0   | .5    |              |     |
|             | 22+        | .0   | .0   | .0  | *   | .1  | .1  | .1   | .0   | .0  | .0   | .2    |              |     |
|             | TOT %      | .1   | .2   | .1  | *   | .1  | .2  | .2   | .0   | .0  | .0   | .8    |              |     |
| 1<2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | 4-10       | .0   | .0   | .0  | .0  | .1  | .1  | .2   | .1   | .0  | .0   | .4    |              |     |
|             | 11-21      | .2   | .0   | .0  | .0  | .1  | .1  | .1   | .1   | .0  | .0   | .4    |              |     |
|             | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |     |
|             | TOT %      | .2   | .0   | .0  | .0  | .1  | .2  | .2   | .2   | .0  | .0   | .8    |              |     |
| 2<5         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .2   | .2    |              |     |
|             | 4-10       | .1   | .1   | .1  | .2  | .0  | .3  | .2   | .1   | .0  | .0   | .9    |              |     |
|             | 11-21      | .1   | .1   | .1  | .0  | .2  | .1  | .0   | .0   | .0  | .0   | .6    |              |     |
|             | 22+        | .1   | .3   | .1  | .0  | .1  | .0  | .0   | .1   | .0  | .0   | .7    |              |     |
|             | TOT %      | .3   | .5   | .3  | .2  | .3  | .4  | .2   | .2   | .0  | .2   | 2.5   |              |     |
| 5<10        | 0-3        | .1   | .1   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .2   | .4    |              |     |
|             | 4-10       | 2.2  | 2.3  | .9  | .5  | .8  | .4  | .6   | .9   | .0  | .0   | 8.6   |              |     |
|             | 11-21      | 2.0  | 2.9  | .9  | .7  | .7  | .9  | 1.4  | 1.8  | .0  | .0   | 11.4  |              |     |
|             | 22+        | 1.1  | .8   | .2  | .2  | .2  | .5  | .6   | .6   | .0  | .0   | 4.1   |              |     |
|             | TOT %      | 5.4  | 6.1  | 1.9 | 1.5 | 1.7 | 1.8 | 2.6  | 3.3  | .0  | .2   | 24.6  |              |     |
| 10+         | 0-3        | .2   | .6   | .8  | .7  | .4  | .3  | .3   | .1   | .0  | 1.5  | 4.9   |              |     |
|             | 4-10       | 6.6  | 6.6  | 3.8 | 3.2 | 2.5 | 2.5 | 2.7  | 3.3  | .0  | .0   | 31.3  |              |     |
|             | 11-21      | 4.6  | 7.7  | 2.4 | .6  | 1.2 | 2.0 | 4.3  | 4.3  | .0  | .0   | 27.2  |              |     |
|             | 22+        | 1.6  | 1.7  | .1  | .3  | .9  | .9  | 1.1  | 1.4  | .0  | .0   | 8.0   |              |     |
|             | TOT %      | 12.9 | 16.6 | 7.1 | 4.8 | 5.0 | 5.7 | 8.5  | 9.2  | .0  | 1.5  | 71.3  |              |     |
| TOT OBS     |            |      |      |     |     |     |     |      |      |     |      |       |              | 965 |
| TOT PCT     |            | 18.9 | 23.5 | 9.4 | 6.5 | 7.2 | 8.2 | 11.7 | 12.8 | .0  | 1.9  | 100.0 |              |     |



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PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+   | TOTAL       | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|---------|-------------|--------------------|--------------|
| 00003          | .0         | .0         | 2.5        | 6.2        | 6.2          | 6.2          | 4.9          | 2.5          | .0           | .0      | 28.4        | 71.6               | 81           |
| 06009          | 2.2        | .0         | 2.2        | 5.4        | 11.8         | 12.9         | 3.2          | 2.2          | .0           | .0      | 39.8        | 60.2               | 93           |
| 12015          | .0         | .0         | .8         | 5.6        | 15.2         | 12.8         | 4.8          | 4.0          | 2.4          | .0      | 45.6        | 54.4               | 125          |
| 18021          | .0         | .0         | 1.7        | 8.5        | 11.9         | 10.2         | 7.6          | 3.4          | .0           | .8      | 44.1        | 55.9               | 118          |
| TOT<br>PCT     | 2<br>.5    | 0<br>.0    | 7<br>1.7   | 27<br>6.5  | 49<br>11.8   | 45<br>10.8   | 22<br>5.3    | 13<br>3.1    | 3<br>.7      | 1<br>.2 | 169<br>40.5 | 248<br>59.5        | 417<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1   | 1<2     | 2<5       | 5<10        | 10+         | TOTAL<br>OBS |
|----------------|---------|---------|---------|-----------|-------------|-------------|--------------|
| 00003          | .0      | .0      | 1.6     | 1.6       | 25.0        | 71.8        | 188          |
| 06009          | .0      | .7      | 1.1     | 3.9       | 28.1        | 66.3        | 285          |
| 12015          | .0      | 2.2     | .4      | 1.3       | 23.8        | 72.3        | 231          |
| 18021          | .0      | .4      | .4      | 2.5       | 23.8        | 73.0        | 282          |
| TOT<br>PCT     | 0<br>.0 | 8<br>.8 | 8<br>.8 | 24<br>2.4 | 249<br>25.3 | 697<br>70.7 | 986<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0            | 2.6        | 11.7        | 19.5            | 68.8              | 77           |
| 06009          | 2.3           | 4.7        | 14.0        | 26.7            | 59.3              | 86           |
| 12015          | .0            | 1.6        | 7.3         | 39.0            | 53.7              | 123          |
| 18021          | .0            | 1.7        | 10.4        | 34.8            | 54.8              | 115          |
| TOT<br>PCT     | 2<br>.5       | 10<br>2.5  | 42<br>10.5  | 126<br>31.4     | 233<br>58.1       | 401<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .2    | .0    | .5    | .0    | .0     | 3            | .7          |
| 70/74  | .0   | .0    | .0    | .7    | 4.4   | 6.1   | 7.3   | 2.7    | 87           | 21.2        |
| 65/69  | .0   | .0    | .0    | 3.4   | 13.4  | 20.5  | 14.6  | 7.3    | 243          | 59.3        |
| 60/64  | .0   | .0    | .0    | 2.0   | 5.6   | 3.9   | 5.6   | 1.2    | 75           | 18.3        |
| 55/59  | .0   | .0    | .0    | .0    | .2    | .2    | .0    | .0     | 2            | .5          |
| TOTAL  | 0    | 0     | 0     | 26    | 97    | 128   | 113   | 46     | 410          | 100.0       |
| PCT    | .0   | .0    | .0    | 6.3   | 23.7  | 31.2  | 27.6  | 11.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W    | NW   | VAR | CALM |
|------|------|------|-----|-----|-----|------|------|-----|------|
| .0   | .0   | .2   | .1  | .1  | .0  | .2   | .1   | .0  | .0   |
| 2.0  | 3.7  | 2.6  | 1.6 | 2.8 | 3.8 | 2.3  | 1.6  | .0  | 1.0  |
| 11.0 | 15.7 | 6.4  | 2.9 | 3.7 | 4.0 | 8.7  | 6.1  | .0  | .7   |
| 3.9  | 4.9  | 2.1  | .5  | 1.2 | .4  | 1.8  | 3.4  | .0  | .2   |
| .1   | .1   | .2   | .0  | .0  | .0  | .0   | .0   | .0  | .0   |
| 17.0 | 24.3 | 11.5 | 5.1 | 7.7 | 8.2 | 13.0 | 11.2 | .0  | 2.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 74  | 72  | 70  | 66  | 62 | 54 | 53  | 66.1 | 345          |
| 06009          | 74  | 72  | 71  | 66  | 62 | 59 | 54  | 66.0 | 578          |
| 12015          | 81  | 76  | 73  | 68  | 64 | 60 | 59  | 68.3 | 363          |
| 18021          | 75  | 74  | 72  | 67  | 62 | 60 | 57  | 67.1 | 556          |
| TOT            | 81  | 74  | 72  | 67  | 62 | 60 | 53  | 66.8 | 1842         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 5.0   | 17.5  | 36.3  | 27.5  | 13.8   | 77   | 80           |
| 06009          | .0   | 5.5   | 27.5  | 24.8  | 29.4  | 12.8   | 76   | 109          |
| 12015          | .0   | 6.6   | 25.6  | 35.5  | 28.1  | 4.1    | 74   | 121          |
| 18021          | .0   | 7.1   | 21.4  | 31.3  | 25.0  | 15.2   | 76   | 112          |
| TOT            | 0    | 26    | 99    | 134   | 116   | 47     | 76   | 422          |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1894-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .0       | .2       | .0       | 1     | .0       | .2        |
| 7/8                | .0       | .0       | .2       | .2       | .0       | .0       | 2     | .0       | .4        |
| 6                  | .0       | .0       | .0       | .2       | .0       | .2       | 2     | .0       | .4        |
| 5                  | .0       | .0       | .2       | .2       | .0       | .0       | 2     | .0       | .4        |
| 4                  | .0       | .0       | .7       | .4       | .5       | .0       | 9     | .0       | 1.6       |
| 3                  | .0       | .0       | .2       | .7       | .9       | .0       | 10    | .0       | 1.8       |
| 2                  | .0       | .0       | .4       | 2.0      | 1.4      | .0       | 21    | .0       | 3.7       |
| 1                  | .0       | .5       | 1.4      | 3.2      | .5       | .0       | 32    | .2       | 5.5       |
| 0                  | .0       | .4       | 4.3      | 4.6      | .5       | .0       | 55    | .0       | 9.8       |
| -1                 | .0       | 1.6      | 7.3      | 5.9      | .0       | .0       | 83    | .0       | 14.8      |
| -2                 | .0       | 1.1      | 11.4     | 2.5      | .0       | .0       | 84    | .2       | 14.8      |
| -3                 | .0       | 2.7      | 11.7     | 2.0      | .0       | .0       | 92    | .2       | 16.2      |
| -4                 | .0       | 3.2      | 9.1      | .9       | .2       | .0       | 75    | .0       | 13.3      |
| -5                 | .2       | 3.6      | 3.4      | .2       | .0       | .0       | 41    | .0       | 7.3       |
| -6                 | .2       | 2.5      | .9       | .2       | .0       | .0       | 21    | .0       | 3.7       |
| -7/-8              | .4       | 1.1      | 2.0      | .0       | .0       | .0       | 19    | .0       | 3.4       |
| -9/-10             | .5       | .2       | .5       | .0       | .0       | .0       | 7     | .0       | 1.2       |
| -11/-13            | .0       | .9       | .2       | .0       | .0       | .0       | 6     | .0       | 1.1       |
| TOTAL              | 7        |          | 302      |          | 24       |          | 562   | 3        | 559       |
| PCT                | 1.2      | 17.6     | 53.7     | 23.0     | 4.3      | .2       | 100.0 | .5       | 99.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .4   | .5    | .0    | .0    | .0  | .9   | .5  | .5   | .5    | .0    | .0    | .0  | 1.6  |
| 1-2     | .0  | 2.8  | 1.2   | .0    | .0    | .0  | 4.0  | .0  | 2.8  | 1.3   | .0    | .0    | .0  | 4.1  |
| 3-4     | .0  | 1.0  | 1.4   | .4    | .0    | .0  | 2.8  | .0  | 1.4  | 5.6   | .6    | .0    | .0  | 7.6  |
| 5-6     | .0  | .8   | 3.2   | .5    | .0    | .0  | 4.5  | .0  | .1   | 4.8   | 1.0   | .0    | .0  | 6.0  |
| 7       | .0  | .0   | .5    | 1.8   | .0    | .0  | 2.3  | .0  | .0   | 1.6   | .1    | .0    | .0  | 1.7  |
| 8-9     | .0  | .0   | .0    | 1.6   | .5    | .0  | 2.1  | .0  | .0   | 1.0   | .0    | .5    | .0  | 1.6  |
| 10-11   | .0  | .0   | .5    | 2.3   | .0    | .0  | 2.8  | .0  | .0   | .0    | .8    | .0    | .0  | .8   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .0  | 5.1  | 7.4   | 6.6   | .5    | .0  | 19.6 | .5  | 4.9  | 14.8  | 2.6   | .5    | .0  | 23.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | 1.0  | .0    | .0    | .0    | .0  | 1.0  | .0  | 1.0  | .0    | .0    | .0    | .0  | 1.0 |
| 1-2     | .5  | 1.0  | .0    | .0    | .0    | .0  | 1.6  | .0  | 1.7  | .5    | .0    | .0    | .0  | 2.2 |
| 3-4     | .0  | 1.6  | 4.1   | .0    | .0    | .0  | 5.7  | .0  | .6   | .1    | .0    | .0    | .0  | .8  |
| 5-6     | .0  | 2.1  | 2.2   | .0    | .0    | .0  | 4.3  | .0  | .0   | .8    | .1    | .0    | .0  | .9  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 5.7  | 6.3   | .0    | .0    | .0  | 12.6 | .0  | 3.4  | 1.6   | .1    | .0    | .0  | 5.1 |

PERIOD: (OVER-ALL) 1963-1973

NOVEMBER  
TABLE 18 (CONT)AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .5  | .0   | .0    | .0    | .0    | .0  | .5  | .1  | .5   | .0    | .0    | .0    | .0  | .6  |
| 1-2     | .5  | 1.6  | .5    | .0    | .0    | .0  | 2.6 | .0  | 2.6  | .0    | .0    | .0    | .0  | 2.6 |
| 3-4     | .0  | .5   | 1.0   | .0    | .0    | .0  | 1.6 | .0  | .5   | .0    | .6    | .0    | .0  | 1.2 |
| 5-6     | .0  | .0   | .8    | .4    | .0    | .0  | 1.2 | .0  | .5   | .8    | .0    | .0    | .0  | 1.3 |
| 7       | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .0   | .5    | .0    | .0    | .0  | .5  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .5    | .0    | .0  | .6  |
| 10-11   | .0  | .0   | .0    | .5    | .0    | .0  | .5  | .0  | .0   | .0    | .5    | .0    | .0  | .5  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 1.0 | 2.1  | 2.7   | .9    | .0    | .0  | 6.7 | .1  | 4.3  | 1.3   | 1.7   | .0    | .0  | 7.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .4  | 1.0  | .0    | .0    | .0    | .0  | 1.4  | .0  | .6   | .0    | .0    | .0    | .0  | .6   |           |
| 1-2     | .0  | 1.4  | .5    | .0    | .0    | .0  | 1.9  | .0  | .5   | .1    | .0    | .0    | .0  | .6   |           |
| 3-4     | .0  | 1.0  | 2.1   | .4    | .0    | .0  | 3.5  | .0  | .0   | 1.7   | .0    | .0    | .0  | 1.7  |           |
| 5-6     | .0  | .0   | .9    | .5    | .0    | .0  | 1.4  | .0  | .6   | .5    | 1.0   | .5    | .0  | 2.7  |           |
| 7       | .0  | .0   | 2.5   | .5    | .0    | .0  | 3.0  | .0  | .0   | .1    | .6    | .0    | .0  | .8   |           |
| 8-9     | .0  | .4   | .5    | .0    | .0    | .0  | .9   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 10-11   | .0  | .0   | .5    | .0    | .0    | .0  | .5   | .0  | .0   | .5    | .0    | .0    | .0  | .5   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .5   | .5    | .0    | .0    | .0  | 1.0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | 1.0   | .0  | 1.0  |           |
| 17-19   | .0  | .0   | .4    | .0    | .0    | .0  | .4   | .0  | .0   | .1    | .0    | .5    | .0  | .6   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .5    | .0  | .5   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .4  | 3.9  | 7.4   | 1.4   | .0    | .0  | 13.1 | .0  | 1.8  | 3.6   | 2.2   | 2.6   | .0  | 10.2 | 97.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.6 | 5.2  | 1.0   | .0    | .0    | .0  | 9.8   |         |
| 1-2     | 1.0 | 14.9 | 4.1   | .0    | .0    | .0  | 20.1  |         |
| 3-4     | .0  | 6.7  | 16.0  | 2.1   | .0    | .0  | 24.7  |         |
| 5-6     | .0  | 4.1  | 13.9  | 3.6   | .5    | .0  | 22.2  |         |
| 7       | .0  | .0   | 5.7   | 3.1   | .0    | .0  | 8.8   |         |
| 8-9     | .0  | .5   | 1.5   | 2.1   | 1.0   | .0  | 5.2   |         |
| 10-11   | .0  | .0   | 1.5   | 4.1   | .0    | .0  | 5.7   |         |
| 12      | .0  | .0   | .5    | .5    | .0    | .0  | 1.0   |         |
| 13-16   | .0  | .0   | .0    | .0    | 1.0   | .0  | 1.0   |         |
| 17-19   | .0  | .0   | .5    | .0    | .5    | .0  | 1.0   |         |
| 20-22   | .0  | .0   | .0    | .0    | .5    | .0  | .5    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.6 | 31.4 | 44.8  | 15.5  | 3.6   | .0  | 100.0 | 194     |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.7 | 2.6 | 9.5  | 7.8  | .9   | 1.7  | .6    | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 88       |
| 6-7          | .0  | .9  | 5.5  | 8.9  | 3.7  | 3.2  | .9    | .0  | .0    | .3    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 82       |
| 8-9          | .0  | .0  | 2.6  | 4.0  | 2.9  | 3.2  | 2.0   | 1.1 | 1.7   | .6    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 64       |
| 10-11        | .0  | .0  | .9   | 2.0  | 2.0  | 1.7  | .9    | 1.1 | 1.1   | 1.1   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 38       |
| 12-13        | .0  | .0  | .0   | .0   | 1.7  | .9   | .6    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 11       |
| >13          | .0  | .0  | .0   | .6   | .3   | .9   | .9    | .0  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 10       |
| INDET        | 1.7 | 3.4 | 4.3  | 1.1  | 1.4  | 1.4  | 1.4   | .3  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 55       |
| TOTAL        | 12  | 24  | 79   | 85   | 45   | 45   | 25    | 10  | 14    | 7     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 348      |
| PCT          | 3.4 | 6.9 | 22.7 | 24.4 | 12.9 | 12.9 | 7.2   | 2.9 | 4.0   | 2.0   | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



PERIOD: (PRIMARY) 1907-1972  
(OVER-ALL) 1855-1972

DECEMBER

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |      | NO SIG WEA |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | DUST |            |
| N        | .6                 | 3.5       | .8   | .0        | .0   | .0              | .0   | 5.0                     | 5.8            | .0        | .0          | .0                  | .0         | .0              | .0   | 89.2       |
| NE       | .7                 | 6.5       | 1.2  | .0        | .0   | .0              | .0   | 8.4                     | 3.5            | .3        | .0          | .0                  | .0         | .0              | .0   | 87.9       |
| E        | 2.2                | 2.8       | .0   | .0        | .0   | .0              | .0   | 5.0                     | .0             | 3.9       | 2.2         | .0                  | 1.1        | .0              | .0   | 87.7       |
| SE       | 6.6                | 3.3       | 1.1  | .0        | .0   | .0              | .0   | 10.9                    | 3.3            | 2.2       | 2.2         | .0                  | 2.2        | .0              | .0   | 79.2       |
| S        | .0                 | 5.7       | 1.1  | .0        | .0   | .0              | .0   | 6.9                     | 5.7            | 2.3       | 4.6         | .0                  | .0         | .0              | .0   | 80.6       |
| SW       | 1.6                | 3.1       | 3.1  | .0        | .0   | .0              | .0   | 7.8                     | 6.3            | .0        | .0          | .0                  | .0         | .0              | .0   | 85.9       |
| W        | 6.1                | 5.6       | 1.4  | .0        | .0   | .0              | 1.9  | 13.6                    | 3.3            | 1.9       | .0          | .0                  | .0         | .0              | .0   | 81.2       |
| NW       | 3.4                | 9.1       | 1.9  | .0        | .0   | .0              | .0   | 14.0                    | .4             | 3.0       | .0          | .0                  | .0         | .0              | .0   | 82.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0   | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0   | 100.0      |
| TOT PCT  | 2.1                | 5.1       | 1.1  | .0        | .0   | .0              | .2   | 8.2                     | 3.3            | 1.4       | .8          | .0                  | .3         | .0              | .0   | 85.9       |
| TOT OBS: | 633                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |      | NO SIG WEA |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | DUST |            |
| 00003      | 1.6                | 3.1       | .8   | .0        | .0   | .0              | .0   | 5.5                     | 4.7            | 3.9       | .0          | .0                  | .0         | .0              | .0   | 85.8       |
| 06009      | 2.2                | 7.1       | 1.1  | .0        | .0   | .0              | .0   | 10.4                    | 2.7            | 2.2       | 1.6         | .0                  | .5         | .0              | .0   | 82.5       |
| 12013      | 2.3                | 5.7       | 1.7  | .0        | .0   | .0              | .0   | 9.1                     | 1.7            | .0        | .6          | .0                  | .0         | .0              | .0   | 88.6       |
| 18021      | 1.8                | 3.0       | .6   | .0        | .0   | .0              | .0   | 6.0                     | 4.2            | .6        | .6          | .0                  | .6         | .0              | .0   | 88.1       |
| TOT PCT    | 2.0                | 4.9       | 1.1  | .0        | .0   | .0              | .2   | 8.0                     | 3.2            | 1.5       | .8          | .0                  | .3         | .0              | .0   | 86.2       |
| TOT OBS:   | 653                |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |      |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 5.7  | 6.5   | 2.1   | .1    | *   |      | 15.7      | 13.0     |          | 13.8       | 18.8  | 15.3  | 16.7  | 16.9  | .0    | 17.9  | 13.7  |
| NE       | .8                 | 10.8 | 9.9   | 2.7   | .1    | *   |      | 24.3      | 12.6     |          | 24.1       | 25.0  | 26.0  | 22.8  | 23.1  | 50.0  | 25.2  | 23.1  |
| E        | 1.3                | 10.0 | 6.2   | 1.1   | .1    | *   |      | 18.8      | 10.8     |          | 17.9       | .0    | 17.1  | 18.9  | 17.3  | 29.2  | 20.9  | 21.6  |
| SE       | 1.0                | 5.3  | 2.9   | .4    | .1    | .1  |      | 9.9       | 10.3     |          | 8.4        | 25.0  | 8.8   | 11.1  | 11.6  | 4.2   | 8.6   | 11.9  |
| S        | .8                 | 2.8  | 1.8   | .3    | .0    | *   |      | 5.8       | 9.7      |          | 5.4        | .0    | 6.0   | 7.2   | 6.8   | .0    | 4.8   | 5.1   |
| SW       | .6                 | 2.3  | 1.8   | .7    | .2    | .1  |      | 5.6       | 12.9     |          | 5.0        | .0    | 3.3   | 5.8   | 7.4   | .0    | 6.2   | 6.7   |
| W        | .6                 | 3.9  | 2.4   | .9    | .3    | .2  |      | 8.2       | 13.5     |          | 10.2       | .0    | 9.4   | 6.7   | 7.7   | .0    | 6.8   | 7.7   |
| NW       | .5                 | 3.8  | 3.6   | .8    | .5    | .1  |      | 9.4       | 13.6     |          | 12.5       | 31.3  | 10.7  | 9.7   | 7.3   | 16.7  | 6.9   | 8.7   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.4                |      |       |       |       |     |      | 2.4       | .0       |          | 2.7        | .0    | 3.5   | 1.1   | 1.9   | .0    | 2.7   | 1.6   |
| TOT OBS  | 170                | 818  | 647   | 166   | 28    | 8   | 1837 |           | 11.8     |          | 336        | 4     | 368   | 180   | 359   | 6     | 337   | 247   |
| TOT PCT  | 9.3                | 44.5 | 35.2  | 9.0   | 1.5   | .4  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |      |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|------|--|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |      |  |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 3.5                | 7.4  | 3.8   | .9    | .1  |      |  | 15.7      | 13.0     |          | 13.8       | 15.7  | 16.6  | 16.1  |    |
| NE       | 4.2                | 13.8 | 9.3   | .9    | .1  |      |  | 24.3      | 12.6     |          | 24.1       | 24.9  | 23.6  | 24.3  |    |
| E        | 4.9                | 10.6 | 2.9   | .3    | .1  |      |  | 18.8      | 10.8     |          | 17.7       | 17.7  | 17.5  | 21.2  |    |
| SE       | 3.2                | 5.2  | 1.1   | .3    | .1  |      |  | 9.9       | 10.3     |          | 8.6        | 9.5   | 11.4  | 10.0  |    |
| S        | 2.5                | 2.4  | .7    | .1    | *   |      |  | 5.8       | 9.7      |          | 5.4        | 6.4   | 6.6   | 4.9   |    |
| SW       | 1.5                | 2.6  | 1.1   | .3    | .1  |      |  | 5.6       | 12.9     |          | 4.9        | 4.2   | 7.3   | 6.4   |    |
| W        | 1.7                | 4.2  | 1.6   | .4    | .3  |      |  | 8.2       | 13.5     |          | 10.1       | 8.5   | 7.6   | 7.1   |    |
| NW       | 2.3                | 4.2  | 2.1   | .6    | .2  |      |  | 9.4       | 13.6     |          | 12.7       | 10.4  | 7.5   | 7.7   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      |  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 2.4                |      |       |       |     |      |  | 2.4       | .0       |          | 2.6        | 2.7   | 1.9   | 2.2   |    |
| TOT OBS  | 482                | 927  | 343   | 70    | 15  | 1837 |  |           | 11.8     |          | 340        | 348   | 365   | 584   |    |
| TOT PCT  | 26.2               | 50.5 | 18.7  | 3.8   | .8  |      |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 2.6  | 6.8 | 45.9 | 33.8               | 9.4   | 1.2   | .3  | 11.5  | 100.0    | 340       |
| 06009 | 2.7  | 6.2 | 46.9 | 34.7               | 7.1   | 2.0   | .4  | 11.6  | 100.0    | 548       |
| 12015 | 1.9  | 6.0 | 42.5 | 36.7               | 10.7  | 1.6   | .5  | 12.4  | 100.0    | 365       |
| 18021 | 2.2  | 8.0 | 42.8 | 35.6               | 9.6   | 1.2   | .5  | 11.8  | 100.0    | 584       |
| TOT   | 44   | 126 | 818  | 647                | 166   | 28    | 8   | 11.8  |          | 1837      |
| PCT   | 2.4  | 6.9 | 44.5 | 35.2               | 9.0   | 1.5   | .4  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 3.5  | 4.7  | 9.2  | 3.1          |              | 5.0                    |
| NE       | 6.2  | 6.6  | 12.1 | 5.2          |              | 4.8                    |
| E        | 2.8  | 2.1  | 5.1  | 3.0          |              | 4.9                    |
| SE       | .7   | 1.1  | 2.9  | 2.3          |              | 5.8                    |
| S        | .9   | .6   | 1.9  | 1.9          |              | 5.5                    |
| SW       | .5   | .8   | 2.0  | 1.3          |              | 5.7                    |
| W        | 1.2  | 2.0  | 2.8  | 2.0          |              | 5.2                    |
| NW       | 1.2  | 3.3  | 3.4  | 1.8          |              | 4.8                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .5   | .2   | .5   | .5           |              | 4.7                    |
| TOT OBS  | 75   | 92   | 171  | 91           | 429          |                        |
| TOT PCT  | 17.5 | 21.4 | 39.9 | 21.2         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .0         | .0         | 2.0        | 4.1          | 3.0          | 1.6          | .0           | .0           | .0    | 9.8                |              |
| NE      | .0         | .2         | .2         | 2.2        | 6.8          | 1.5          | 1.6          | .8           | .2           | .1    | 16.5               |              |
| E       | .2         | .0         | .2         | 1.5        | 1.9          | .2           | .6           | .6           | .0           | .2    | 7.8                |              |
| SE      | .0         | .0         | .1         | 1.4        | 1.0          | 1.0          | .2           | .0           | .2           | .0    | 3.1                |              |
| S       | .0         | .0         | .0         | .6         | 1.1          | .3           | .3           | .5           | .0           | .0    | 2.5                |              |
| SW      | .0         | .0         | .2         | 1.0        | .2           | .8           | .2           | .2           | .0           | .0    | 1.9                |              |
| W       | .0         | .2         | .2         | .9         | .8           | .3           | .5           | .1           | .2           | .2    | 4.5                |              |
| NW      | .0         | .1         | .8         | 1.0        | 1.5          | .7           | .5           | .1           | .0           | .1    | 5.2                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .2         | .0           | .2           | .0           | .0           | .0           | .0    | 1.2                |              |
| TOT OBS | 1          | 2          | 7          | 46         | 75           | 35           | 23           | 10           | 3            | 2     | 225                |              |
| TOT PCT | .2         | .5         | 1.6        | 10.7       | 17.5         | 8.2          | 5.4          | 2.3          | .7           | .5    | 52.4               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | .9        | .9   | .9   | 1.1  | 1.1  | 1.1  | 1.1   | 1.1  |
| >5000             | 3.2       | 3.2  | 3.2  | 3.4  | 3.4  | 3.4  | 3.4   | 3.4  |
| >3500             | 7.5       | 8.2  | 8.4  | 8.7  | 8.7  | 8.7  | 8.7   | 8.7  |
| >2000             | 14.2      | 16.4 | 16.9 | 17.1 | 17.1 | 17.1 | 17.1  | 17.1 |
| >1000             | 29.2      | 33.3 | 33.8 | 34.0 | 34.2 | 34.5 | 34.5  | 34.5 |
| >600              | 37.0      | 42.9 | 44.3 | 44.5 | 44.7 | 45.0 | 45.0  | 45.0 |
| >300              | 38.6      | 44.5 | 45.9 | 46.1 | 46.3 | 46.6 | 46.6  | 46.6 |
| >150              | 38.8      | 44.7 | 46.1 | 46.3 | 46.8 | 47.0 | 47.0  | 47.0 |
| >0                | 38.8      | 44.7 | 46.3 | 46.6 | 47.0 | 47.3 | 47.3  | 47.3 |
| TOTAL             | 170       | 196  | 203  | 204  | 206  | 207  | 207   | 207  |

TOTAL NUMBER OF OBS: 438

PCT FREQ NH <5/8: 52.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1   | 2    | 3    | 4    | 5    | 6    | 7    | 8    | OBSCD | TOTAL<br>OBS |
|--|-----|-----|------|------|------|------|------|------|------|-------|--------------|
|  | 5.5 | 6.3 | 14.4 | 14.0 | 11.4 | 10.1 | 11.2 | 11.6 | 15.3 | .2    | 457          |

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .2  | .0   | .0  | .0   | .2    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0  | .2  | .0   | .0  | .0   | .2    |              |
| 1/2<1        | PCP    | .0   | .2   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .2    |              |
|              | NO PCP | .0   | .2   | .3   | .2  | .3  | .0  | .0  | .0   | .0  | .0   | .9    |              |
|              | TOT %  | .0   | .3   | .3   | .2  | .3  | .0  | .0  | .0   | .0  | .0   | 1.1   |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0  | .2  | .0   | .0  | .0   | .2    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0  | .0  | .2  | .0   | .0  | .0   | .2    |              |
| 2<5          | PCP    | .2   | .1   | .3   | .5  | .0  | .0  | .3  | *    | .0  | .0   | 1.4   |              |
|              | NO PCP | .2   | .2   | .0   | .0  | .0  | .2  | .2  | .0   | .0  | .0   | .8    |              |
|              | TOT %  | .4   | .2   | .3   | .5  | .0  | .2  | .4  | .2   | .0  | .0   | 2.2   |              |
| 5<10         | PCP    | .1   | .9   | .4   | .3  | .5  | .4  | .6  | .8   | .0  | .0   | 4.0   |              |
|              | NO PCP | 3.0  | 5.0  | 3.7  | 2.2 | 2.1 | 1.6 | 2.1 | 2.9  | .0  | .2   | 22.8  |              |
|              | TOT %  | 3.0  | 5.9  | 4.1  | 2.5 | 2.6 | 2.0 | 2.7 | 3.7  | .0  | .2   | 26.7  |              |
| 10+          | PCP    | .6   | 1.1  | .0   | .0  | .0  | .0  | .2  | .6   | .0  | .0   | 2.5   |              |
|              | NO PCP | 14.8 | 19.7 | 9.5  | 4.1 | 4.0 | 2.9 | 4.8 | 3.9  | .0  | 1.3  | 67.1  |              |
|              | TOT %  | 15.5 | 20.8 | 9.5  | 4.1 | 4.0 | 2.9 | 5.0 | 6.6  | .0  | 1.3  | 69.6  |              |
| TOT OBS      |        |      |      |      |     |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |      |     |     |     |     |      |     |      |       |              |
|              |        | 18.9 | 27.3 | 14.2 | 7.2 | 6.9 | 5.1 | 8.4 | 10.5 | .0  | 1.4  | 100.0 | 632          |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .1  | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0   | .0  | .0  | .0  | .1  | .0   | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .2   | .2   | .1  | .0  | .0  | .0  | .0   | .0  | .0   | .5    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .2  | .0  | .0  | .2   | .0  | .0   | .4    |              |
|              | TOT %      | .0   | .2   | .2   | .1  | .2  | .0  | .0  | .2   | .0  | .0   | .8    |              |
| 1<2          | 0-3        | .0   | .0   | *    | *   | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | 4-10       | .1   | .0   | .0   | .0  | .0  | .0  | .1  | .0   | .0  | .0   | .2    |              |
|              | 11-21      | .1   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .2   | .0   | *    | *   | .0  | .0  | .1  | .0   | .0  | .0   | .4    |              |
| 2<5          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | .0   | .0  | *   | .1  | .0  | .1   | .0  | .0   | .5    |              |
|              | 11-21      | .1   | *    | .1   | .2  | .0  | .0  | .2  | .0   | .0  | .0   | .7    |              |
|              | 22+        | .1   | *    | .1   | .2  | .0  | .0  | .1  | *    | .0  | .0   | .6    |              |
|              | TOT %      | .3   | .2   | .2   | .4  | *   | .1  | .3  | .1   | .0  | .0   | 1.7   |              |
| 5<10         | 0-3        | .3   | .2   | .2   | .3  | .2  | .1  | *   | .1   | .0  | .1   | 1.5   |              |
|              | 4-10       | .5   | 1.5  | 1.7  | 1.0 | .8  | .4  | 1.2 | .9   | .0  | .0   | 8.1   |              |
|              | 11-21      | 1.1  | 2.5  | 1.2  | .5  | .6  | .5  | .8  | 1.1  | .0  | .0   | 8.3   |              |
|              | 22+        | .4   | .5   | .4   | .1  | .0  | .3  | .6  | .6   | .0  | .0   | 2.9   |              |
|              | TOT %      | 2.4  | 4.7  | 3.4  | 1.9 | 1.6 | 1.4 | 2.6 | 2.8  | .0  | .1   | 20.8  |              |
| 10+          | 0-3        | 1.0  | .5   | .9   | .5  | .3  | .3  | .4  | .3   | .0  | 1.7  | 6.0   |              |
|              | 4-10       | 5.9  | 8.1  | 6.9  | 3.6 | 1.8 | 1.4 | 2.8 | 3.2  | .0  | .0   | 33.9  |              |
|              | 11-21      | 6.5  | 8.3  | 4.7  | 1.4 | 1.5 | 1.5 | 1.6 | 2.8  | .0  | .0   | 28.3  |              |
|              | 22+        | 2.1  | 3.1  | .4   | .3  | .1  | .3  | .7  | 1.1  | .0  | .0   | 8.1   |              |
|              | TOT %      | 15.5 | 19.9 | 13.0 | 5.9 | 3.8 | 3.5 | 5.6 | 7.4  | .0  | 1.7  | 76.2  |              |
| TOT OBS      |            |      |      |      |     |     |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |      |     |     |     |     |      |     |      |       |              |
|              |            | 18.4 | 25.0 | 16.9 | 8.2 | 5.6 | 5.1 | 8.6 | 10.5 | .0  | 1.8  | 100.0 | 1072         |



PERIOD: (PRIMARY) 1907-1972  
(OVER-ALL) 1855-1972

DECEMBER

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .0         | .0         | 3.1        | 9.4        | 16.7         | 6.3          | 5.2          | 3.1          | 1.0          | .0    | 44.8  | 55.2                | 96           |
| 06009         | .0         | .0         | .0         | 12.9       | 19.8         | 5.9          | 3.0          | 3.0          | .0           | 2.0   | 46.5  | 53.5                | 101          |
| 12015         | .7         | .7         | 2.1        | 8.3        | 15.2         | 9.0          | 6.9          | 2.8          | .7           | .0    | 46.2  | 53.8                | 145          |
| 18021         | .0         | 1.0        | 1.0        | 11.8       | 17.6         | 11.8         | 5.9          | .0           | 1.0          | .0    | 50.0  | 50.0                | 102          |
| TOT           | 1          | 2          | 7          | 46         | 76           | 37           | 24           | 10           | 3            | 2     | 208   | 236                 | 444          |
| PCT           | .2         | .5         | 1.6        | 10.4       | 17.1         | 8.3          | 5.4          | 2.3          | .7           | .5    | 46.8  | 53.2                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .0    | .5  | 1.4 | 16.1 | 82.0 | 211          |
| 06009         | .3   | 1.2   | .3  | 1.5 | 23.2 | 73.4 | 327          |
| 12015         | .0   | .8    | .4  | 2.4 | 17.9 | 78.5 | 246          |
| 18021         | .0   | 1.0   | .3  | 1.3 | 25.3 | 72.1 | 308          |
| TOT           | 1    | 9     | 4   | 18  | 232  | 828  | 1092         |
| PCT           | .1   | .8    | .4  | 1.6 | 21.2 | 75.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .0           | 3.3        | 15.2        | 31.5            | 53.3               | 92           |
| 06009         | .0           | 1.0        | 14.0        | 33.0            | 53.0               | 100          |
| 12015         | .7           | 3.5        | 12.5        | 34.0            | 53.5               | 144          |
| 18021         | .0           | 2.9        | 15.7        | 34.3            | 50.0               | 102          |
| TOT           | 1            | 12         | 62          | 146             | 230                | 438          |
| PCT           | .2           | 2.7        | 14.2        | 33.3            | 52.5               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .0    | .2    | .0    | .0    | .0     | 1            | .2          |
| 70/74  | .0   | .0    | .0    | .2    | 1.1   | .7    | .2    | .2     | 11           | 2.5         |
| 65/69  | .0   | .0    | .2    | 2.3   | 6.5   | 14.0  | 10.6  | 6.1    | 176          | 39.7        |
| 60/64  | .0   | .0    | .2    | 4.1   | 15.8  | 19.6  | 9.9   | 4.7    | 241          | 54.4        |
| 55/59  | .0   | .0    | .0    | .0    | 1.1   | .5    | .7    | .9     | 14           | 3.2         |
| TOTAL  | 0    | 0     | 2     | 29    | 110   | 154   | 95    | 53     | 443          | 100.0       |
| PCT    | .0   | .0    | .5    | 6.5   | 24.8  | 34.8  | 21.4  | 12.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW   | VAR | CALM |
|------|------|------|-----|-----|-----|-----|------|-----|------|
| .0   | .0   | .0   | .0  | .0  | .0  | .2  | .1   | .0  | .0   |
| .8   | .3   | .2   | .0  | .0  | .3  | .6  | .1   | .0  | .2   |
| 4.2  | 8.1  | 7.6  | 3.9 | 4.0 | 3.0 | 3.9 | 4.3  | .0  | .7   |
| 13.3 | 18.7 | 7.9  | 2.5 | 1.1 | 1.5 | 3.0 | 5.8  | .0  | .7   |
| .6   | .3   | .5   | .6  | .0  | .2  | .2  | .5   | .0  | .2   |
| 19.0 | 27.4 | 16.2 | 7.0 | 5.1 | 5.0 | 7.8 | 10.7 | .0  | 1.8  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 70  | 69  | 67  | 63  | 59 | 57 | 52  | 63.5 | 337          |
| 06009         | 71  | 68  | 67  | 63  | 59 | 57 | 55  | 63.0 | 557          |
| 12015         | 75  | 72  | 70  | 65  | 61 | 59 | 55  | 65.5 | 351          |
| 18021         | 75  | 72  | 69  | 64  | 60 | 56 | 52  | 64.1 | 573          |
| TOT           | 75  | 71  | 69  | 64  | 59 | 58 | 52  | 63.9 | 1818         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 4.3   | 23.7  | 40.9  | 17.2  | 14.0   | 76   | 93           |
| 06009         | .0   | 3.3   | 26.4  | 37.2  | 19.8  | 13.2   | 76   | 121          |
| 12015         | .0   | 10.6  | 28.0  | 28.0  | 21.2  | 12.1   | 74   | 132          |
| 18021         | .0   | 8.3   | 21.1  | 33.0  | 28.4  | 9.2    | 75   | 109          |
| TOT           | 0    | 31    | 114   | 156   | 99    | 55     | 75   | 455          |

PERIOD: (PRIMARY) 1907-1972  
(OVER-ALL) 1855-1972

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32.6N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | TOT   | N<br>FOG | W<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|----------|
| 9/10               | .0       | .0       | .0       | .0       | .0       | .0       | .2       | 1     | .0       | .2       |
| 7/8                | .0       | .0       | .0       | .0       | .0       | .0       | .2       | 1     | .0       | .2       |
| 5                  | .0       | .0       | .0       | .0       | .4       | .0       | .0       | 2     | .0       | .4       |
| 4                  | .0       | .0       | .0       | .0       | 1.1      | .9       | .0       | 11    | .0       | 2.0      |
| 3                  | .0       | .0       | .0       | .4       | .7       | .5       | .0       | 9     | .0       | 1.6      |
| 2                  | .0       | .0       | .0       | .9       | 1.4      | 1.1      | .0       | 19    | .0       | 3.4      |
| 1                  | .0       | .0       | .0       | .7       | 3.2      | .7       | .0       | 26    | .0       | 4.6      |
| 0                  | .0       | .0       | .2       | 2.3      | 7.0      | 1.1      | .0       | 59    | .4       | 10.2     |
| -1                 | .0       | .0       | .0       | 4.1      | 7.0      | .5       | .0       | 65    | .0       | 11.6     |
| -2                 | .0       | .0       | .2       | 10.9     | 5.9      | .4       | .0       | 97    | .0       | 17.3     |
| -3                 | .0       | .0       | .9       | 11.6     | 5.0      | .0       | .0       | 98    | .0       | 17.5     |
| -4                 | .0       | .0       | .7       | 9.6      | 2.0      | .0       | .0       | 69    | .0       | 12.3     |
| -5                 | .0       | .0       | 1.1      | 5.7      | 1.3      | .0       | .0       | 45    | .2       | 7.9      |
| -6                 | .0       | .0       | 1.8      | 2.3      | .7       | .0       | .0       | 27    | .4       | 4.5      |
| -7/-8              | .0       | .0       | 1.8      | 1.1      | .7       | .0       | .0       | 20    | .0       | 3.6      |
| -9/-10             | .2       | .0       | .7       | .4       | .0       | .0       | .0       | 7     | .0       | 1.3      |
| -11/-13            | .0       | .7       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .7       |
| TOTAL              | 1        | 4        | 41       | 280      | 203      | 29       | 2        | 560   | 5        | 555      |
| PCT                | .2       | .7       | 7.3      | 50.0     | 36.3     | 5.2      | .4       | 100.0 | .9       | 99.1     |

PERIOD: (OVER-ALL) 1963-1972

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .5  | .0   | .0    | .0    | .0    | .0  | .5   |
| 1-2     | .0  | 4.5  | 2.3   | .0    | .0    | .0  | 6.8  | .0  | 5.9  | 1.5   | .0    | .0    | .0  | 7.4  |
| 3-4     | .0  | 1.5  | 2.7   | .0    | .0    | .0  | 4.2  | .0  | 5.1  | 7.8   | .0    | .0    | .0  | 12.8 |
| 5-6     | .0  | .0   | 3.8   | .5    | .0    | .0  | 4.4  | .0  | .5   | 5.6   | 2.7   | .0    | .0  | 8.9  |
| 7       | .0  | 1.0  | 1.5   | .5    | .0    | .0  | 3.0  | .0  | .0   | 1.2   | .0    | .0    | .0  | 1.2  |
| 8-9     | .0  | .0   | 1.5   | .5    | .0    | .0  | 2.0  | .0  | .0   | .7    | .5    | .0    | .0  | 1.2  |
| 10-11   | .0  | .0   | .4    | 1.5   | .4    | .0  | 2.3  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 12      | .0  | .0   | .0    | .5    | .0    | .0  | .5   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | 1.1   | .0    | .0  | 1.1  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .0  | 7.0  | 12.3  | 3.7   | .4    | .0  | 23.4 | .5  | 11.5 | 16.8  | 4.5   | .0    | .0  | 33.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .5   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .0  | 3.8  | 1.1   | .0    | .0    | .0  | 4.9  | .0  | 1.5  | .5    | .0    | .0    | .0  | 2.0 |
| 3-4     | .0  | .5   | 2.9   | .0    | .0    | .0  | 3.4  | .0  | .5   | .7    | .0    | .0    | .0  | 1.2 |
| 5-6     | .0  | .0   | 1.5   | .0    | .0    | .0  | 1.5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .5    | .0    | .0  | .5   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | 1.1   | .5    | .0  | 1.6 |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 4.4  | 5.5   | .5    | .0    | .0  | 10.4 | .0  | 2.6  | 1.2   | 1.1   | .5    | .0  | 5.5 |

PERIOD: (OVER-ALL) 1963-1972

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TABLE 18 (CONT)

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32.6N 16.6W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|---------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 1-2     | .0  | 1.1  | .5    | .0    | .0    | .0  | 1.6 | .0  | 1.1  | 1.1   | .0    | .0    | .0  | .0  | 2.2     |
| 3-4     | .0  | .0   | 1.4   | .0    | .0    | .0  | 1.4 | .0  | .7   | .7    | .5    | .0    | .0  | .0  | 1.9     |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .5   | .0    | .0    | .0    | .0  | .0  | .5      |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0      |
| TOT PCT | .0  | 1.1  | 1.9   | .0    | .0    | .0  | 3.0 | .0  | 2.3  | 1.8   | .5    | .0    | .0  | .0  | 4.6     |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|---------|
| <1      | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .0  | 1.1  | .0    | .0    | .0    | .0  | .0   | 1.1     |
| 1-2     | .0  | .8   | .4    | .0    | .0    | .0  | 1.2 | .0  | 2.0  | .7    | .0    | .0    | .0  | .0   | 2.7     |
| 3-4     | .0  | 1.0  | 1.1   | .5    | .0    | .0  | 2.6 | .0  | .5   | 3.6   | .0    | .0    | .0  | .0   | 4.1     |
| 5-6     | .4  | .0   | .4    | .0    | .0    | .0  | .8  | .1  | .0   | .7    | .0    | .0    | .0  | .0   | .8      |
| 7       | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .0  | .8   | .5    | .0    | .5    | .0  | .0   | 1.9     |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .5    | .0    | .0    | .0  | .0   | .5      |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .7    | .0    | .1    | .0  | .0   | .8      |
| 12      | .0  | .0   | .0    | .4    | .0    | .0  | .4  | .0  | .0   | .0    | .1    | .0    | .0  | .0   | .1      |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .5    | .0  | .0   | .5      |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0      |
| TOT PCT | .4  | 2.7  | 1.9   | 1.0   | .0    | .0  | 6.0 | .1  | 4.5  | 6.7   | .1    | 1.2   | .0  | 12.7 | 98.9    |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.7 | 2.2  | .0    | .0    | .0    | .0  | 4.9   |         |
| 1-2     | .0  | 20.5 | 8.1   | .0    | .0    | .0  | 28.6  |         |
| 3-4     | .0  | 9.7  | 20.5  | 1.1   | .0    | .0  | 31.4  |         |
| 5-6     | .5  | 1.1  | 11.9  | 3.2   | .0    | .0  | 16.8  |         |
| 7       | .0  | 2.2  | 3.2   | .5    | .5    | .0  | 6.5   |         |
| 8-9     | .0  | .0   | 2.7   | 1.6   | .0    | .0  | 4.3   |         |
| 10-11   | .0  | .0   | 1.1   | 2.7   | 1.1   | .0  | 4.9   |         |
| 12      | .0  | .0   | .0    | 1.1   | .0    | .0  | 1.1   |         |
| 13-16   | .0  | .0   | .0    | 1.1   | .5    | .0  | 1.6   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 3.2 | 35.7 | 47.6  | 11.4  | 2.2   | .0  | 100.0 | 185     |

PERIOD: (OVER-ALL) 1949-1972

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 8.2  | 14.2 | 8.5  | 3.0  | .3  | .5    | .3  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 135   | 4        |
| 6-7          | .0  | 1.4  | 3.6  | 7.4  | 3.0  | 1.1 | 2.2   | .8  | .8    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 74    | 6        |
| 8-9          | .3  | .5   | 3.0  | 4.6  | 4.6  | 2.7 | 1.4   | .8  | .8    | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 71    | 7        |
| 10-11        | .0  | .5   | .3   | 1.1  | 1.6  | 1.6 | 1.1   | .5  | 1.1   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 29    | 8        |
| 12-13        | .0  | .0   | .8   | .5   | .8   | .3  | .0    | .0  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10    | 6        |
| >13          | .0  | .0   | .0   | .0   | .5   | .0  | .3    | .0  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 5     | 10       |
| INDET        | .8  | 3.3  | 1.4  | 2.2  | 1.9  | .5  | .5    | .0  | .8    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 42    | 5        |
| TOTAL        | 11  | 51   | 85   | 89   | 57   | 24  | 22    | 9   | 16    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 366   | 5        |
| PCT          | 3.0 | 13.9 | 23.2 | 24.3 | 15.6 | 6.6 | 6.0   | 2.5 | 4.4   | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                      |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|----------------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N        | .9                 | 3.8       | .4   | .0        | .0   | .0              | .0   | 5.1                     | 2.4            | .4        | 1.1         | .0                  | .8         | .0                   | 90.3       |
| NE       | .7                 | 3.2       | .7   | .0        | .0   | .0              | .0   | 4.7                     | 1.5            | .3        | 1.3         | .1                  | 1.0        | .0                   | 91.2       |
| E        | 1.7                | 3.3       | .5   | .0        | .0   | .0              | .0   | 5.5                     | .9             | .8        | 2.3         | .0                  | 1.5        | .0                   | 89.4       |
| SE       | 4.1                | 3.0       | .9   | .0        | .0   | .0              | .0   | 7.9                     | 1.4            | 1.9       | .7          | .0                  | .5         | .0                   | 88.0       |
| S        | 2.8                | 1.9       | 1.2  | .0        | .0   | .0              | .0   | 5.9                     | 5.2            | 1.1       | 1.0         | .0                  | .5         | .0                   | 86.5       |
| SW       | 2.7                | 3.0       | 1.1  | .0        | .0   | .0              | .0   | 6.7                     | 2.4            | .7        | .9          | .0                  | .8         | .2                   | 88.6       |
| W        | 2.4                | 4.0       | 1.0  | .0        | .0   | .0              | .2   | 7.5                     | 3.1            | .9        | 1.0         | .0                  | .7         | .0                   | 87.2       |
| NW       | 1.3                | 4.6       | .6   | .0        | .0   | .0              | .0   | 6.4                     | 2.8            | .7        | 1.2         | .0                  | .9         | .0                   | 88.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                   | .0         |
| CALM     | .4                 | .7        | .0   | .0        | .0   | .0              | .0   | 1.1                     | 2.0            | .4        | 1.4         | .0                  | 3.1        | .0                   | 92.1       |
| TOT PCT  | 1.5                | 3.4       | .7   | .0        | .0   | .0              | *    | 5.5                     | 2.2            | .6        | 1.3         | *                   | 1.0        | *                    | 89.4       |
| TOT OBS: | 8037               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                      |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|----------------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| 0000       | 1.7                | 2.6       | .5   | .0        | .0   | .0              | .0   | 4.8                     | 2.8            | 1.3       | .9          | .0                  | .7         | .1                   | 89.6       |
| 0600       | 2.1                | 3.9       | 1.0  | .0        | .0   | .0              | *    | 7.0                     | 2.2            | 1.2       | 1.9         | *                   | 1.2        | .0                   | 86.8       |
| 1200       | 1.1                | 2.9       | .8   | .0        | .0   | .0              | .0   | 4.7                     | 2.0            | .2        | .8          | .0                  | 1.1        | .0                   | 91.2       |
| 1800       | 1.2                | 4.0       | .5   | .0        | .0   | .0              | *    | 5.8                     | 1.8            | .2        | 1.8         | .0                  | .9         | *                    | 89.4       |
| TOT PCT    | 1.5                | 3.4       | .7   | .0        | .0   | .0              | *    | 5.6                     | 2.2            | .7        | 1.4         | *                   | 1.0        | *                    | 89.2       |
| TOT OBS:   | 8404               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                      |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.3                | 9.8  | 8.1   | 1.5   | .1    | *   |       | 20.8      | 11.7     |          | 20.9       | 21.3  | 21.6  | 20.5  | 20.5  | 17.9  | 20.5  | 21.2  |
| NE       | 1.2                | 11.6 | 13.2  | 2.3   | .1    | *   |       | 28.4      | 12.4     |          | 28.4       | 25.3  | 28.0  | 28.2  | 28.8  | 28.4  | 28.8  | 28.1  |
| E        | .8                 | 4.9  | 3.6   | .6    | *     | *   |       | 9.9       | 10.7     |          | 9.7        | 7.1   | 10.0  | 10.2  | 9.8   | 7.1   | 10.3  | 9.8   |
| SE       | .5                 | 2.6  | 1.4   | .3    | *     | *   |       | 4.9       | 9.4      |          | 4.6        | 5.1   | 4.3   | 5.4   | 5.5   | 4.7   | 4.8   | 5.1   |
| S        | .5                 | 2.2  | 1.2   | .3    | *     | *   |       | 4.2       | 9.2      |          | 4.2        | 4.9   | 3.8   | 4.5   | 4.6   | 3.2   | 4.5   | 3.7   |
| SW       | .7                 | 3.1  | 2.3   | .7    | .1    | *   |       | 6.9       | 10.9     |          | 6.8        | 9.9   | 6.5   | 6.4   | 7.5   | 11.2  | 7.5   | 6.3   |
| W        | .9                 | 4.1  | 3.3   | .9    | .2    | *   |       | 9.4       | 11.5     |          | 9.8        | 10.0  | 9.3   | 8.7   | 9.9   | 11.7  | 9.3   | 9.2   |
| NW       | .9                 | 5.7  | 4.1   | .9    | .7    | *   |       | 11.8      | 11.3     |          | 12.1       | 12.7  | 12.2  | 11.7  | 10.7  | 15.8  | 11.5  | 13.2  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.5                |      |       |       |       |     |       | 3.5       | .0       |          | 3.6        | 3.6   | 4.3   | 4.4   | 2.7   | .0    | 2.8   | 3.5   |
| TOT OBS  |                    |      |       |       |       |     | 24501 |           | 11.2     |          | 4396       | 84    | 4685  | 2794  | 4690  | 81    | 4549  | 3222  |
| TOT PCT  | 10.3               | 44.1 | 37.2  | 7.5   | .8    | .1  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 5.0                | 11.3 | 4.0   | .5    | *   |           | 20.8     | 11.7     | 20.8       | 21.2  | 20.4  | 20.7  |    |
| NE       | 5.2                | 15.7 | 6.8   | .6    | *   |           | 28.4     | 12.4     | 28.4       | 28.1  | 28.8  | 28.5  |    |
| E        | 2.8                | 5.3  | 1.6   | .2    | *   |           | 9.9      | 10.7     | 9.6        | 10.1  | 9.8   | 10.1  |    |
| SE       | 1.7                | 2.4  | .7    | .1    | *   |           | 4.9      | 9.4      | 4.6        | 4.7   | 5.5   | 4.9   |    |
| S        | 1.6                | 1.9  | .6    | .1    | *   |           | 4.2      | 9.2      | 4.3        | 4.1   | 4.6   | 4.1   |    |
| SW       | 2.2                | 3.1  | 1.4   | .2    | *   |           | 6.9      | 10.9     | 6.9        | 6.4   | 7.6   | 7.0   |    |
| W        | 2.7                | 4.3  | 2.0   | .4    | .1  |           | 9.4      | 11.5     | 9.8        | 9.1   | 10.0  | 9.2   |    |
| NW       | 3.5                | 5.6  | 2.3   | .4    | .1  |           | 11.8     | 11.3     | 12.0       | 12.0  | 10.7  | 12.2  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.5                |      |       |       |     |           | 3.5      | .0       | 3.6        | 4.4   | 2.6   | 3.1   |    |
| TOT OBS  |                    |      |       |       |     | 24501     |          | 11.2     | 4480       | 7479  | 4771  | 7771  |    |
| TOT PCT  | 28.1               | 49.7 | 19.4  | 2.5   | .3  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 3.6  | 6.6 | 45.4 | 36.6               | 7.0   | .8    | .1  | 11.1  | 100.0    | 4480      |
| 06009 | 4.4  | 7.4 | 44.7 | 35.3               | 7.4   | .8    | .1  | 10.9  | 100.0    | 7479      |
| 12015 | 2.6  | 7.0 | 42.2 | 39.2               | 8.1   | .8    | .1  | 11.6  | 100.0    | 4771      |
| 18021 | 3.1  | 6.4 | 43.9 | 38.2               | 7.6   | .8    | .1  | 11.3  | 100.0    | 7771      |
| TOT   |      |     |      |                    |       |       |     | 11.2  |          | 24501     |
| PCT   | 3.5  | 6.8 | 44.1 | 37.2               | 7.5   | .8    | .1  | 100.0 |          |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 E  | TOTAL CLOUD OBSCD | MEAN CLOUD COVER |
|----------|------|------|------|------|-------------------|------------------|
|          |      |      |      |      |                   |                  |
| N        | 6.7  | 5.7  | 8.3  | 3.5  |                   | 4.5              |
| NE       | 6.9  | 6.3  | 10.2 | 4.6  |                   | 4.6              |
| E        | 2.3  | 1.5  | 2.9  | 1.5  |                   | 4.4              |
| SE       | .7   | .7   | 1.5  | .9   |                   | 4.7              |
| S        | 1.1  | .8   | 1.6  | 1.2  |                   | 4.3              |
| SW       | 1.7  | 1.7  | 2.6  | 1.3  |                   | 4.3              |
| W        | 2.4  | 2.3  | 3.8  | 1.6  |                   | 4.4              |
| NW       | 3.3  | 2.6  | 3.9  | 1.2  |                   | 4.1              |
| VAR      | .0   | .0   | .0   | .0   |                   | 3.6              |
| CALM     | 1.2  | .5   | .6   | .3   |                   | 4.5              |
| TOT OBS  |      |      |      |      | 5254              |                  |
| TOT PCT  | 26.5 | 22.1 | 35.4 | 16.0 | 100.0             |                  |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| *   | *   | .2  | 1.7 | 3.2  | 2.7  | 1.0  | .5   | .2   | .1    | 14.6    |       |
| .1  | *   | .2  | 1.7 | 4.4  | 3.0  | 1.7  | .6   | .2   | .1    | 16.0    |       |
| *   | *   | .1  | .3  | 1.1  | .9   | .4   | .2   | *    | .1    | 5.2     |       |
| .0  | .0  | *   | .4  | .4   | .4   | .3   | .1   | .1   | *     | 2.1     |       |
| .0  | .0  | .1  | .4  | .6   | .4   | .2   | .1   | *    | .1    | 2.7     |       |
| *   | .0  | .1  | .5  | .8   | .6   | .3   | .1   | *    | .1    | 4.8     |       |
| *   | *   | .1  | .8  | 1.3  | .8   | .3   | .1   | *    | *     | 6.5     |       |
| *   | *   | .2  | .7  | 1.3  | .8   | .6   | .1   | *    | *     | 7.1     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| *   | .0  | *   | .1  | .2   | .2   | .1   | *    | *    | .0    | 2.0     |       |
| .2  | .1  | 1.0 | 6.7 | 13.2 | 9.9  | 4.9  | 1.8  | .6   | .5    | 61.0    |       |
|     |     |     |     |      |      |      |      |      |       | 5254    |       |
|     |     |     |     |      |      |      |      |      |       | 100.0   |       |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .9        | 1.0  | 1.0  | 1.1  | 1.1  | 1.1  | 1.1   | 1.1  |
| >5000          | 2.5       | 2.8  | 2.9  | 2.9  | 2.9  | 2.9  | 2.9   | 2.9  |
| >3500          | 6.8       | 7.6  | 7.7  | 7.8  | 7.8  | 7.8  | 7.8   | 7.8  |
| >2000          | 14.7      | 17.2 | 17.7 | 17.8 | 17.8 | 17.8 | 17.8  | 17.8 |
| >1000          | 25.8      | 30.0 | 30.8 | 30.8 | 30.9 | 30.9 | 30.9  | 30.9 |
| >600           | 30.8      | 36.3 | 37.2 | 37.4 | 37.4 | 37.4 | 37.5  | 37.5 |
| >300           | 31.6      | 37.2 | 38.2 | 38.4 | 38.4 | 38.4 | 38.5  | 38.5 |
| >150           | 31.6      | 37.4 | 38.3 | 38.5 | 38.5 | 38.6 | 38.6  | 38.6 |
| >0             | 31.7      | 37.5 | 38.5 | 38.6 | 38.7 | 38.8 | 38.8  | 38.8 |

TOTAL NUMBER OF OBS: 5339

PCT FREQ NH <5/8: 61.2

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0   | 1    | 2    | 3    | 4    | 5   | 6    | 7   | 8    | OBSCD | TOTAL OBS |
|--|-----|------|------|------|------|-----|------|-----|------|-------|-----------|
|  | 8.1 | 12.0 | 16.2 | 13.3 | 11.0 | 7.8 | 10.1 | 9.3 | 12.1 | .1    | 5685      |

PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0002 MADEIRA ISLANDS  
32.6N 16.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | *    | *    | .0  | .0  | .0  | *   | *    | *    | .0  | .0   | .1    |              |
|              | NO PCP | *    | *    | *   | *   | .0  | .0  | *    | *    | .0  | *    | .1    |              |
|              | TOT %  | *    | *    | *   | *   | .0  | *   | *    | *    | .0  | *    | .2    |              |
| 1/2<1        | PCP    | *    | *    | *   | *   | .0  | .0  | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .2   | .3   | .1  | .1  | .1  | .1  | .1   | .1   | .0  | .0   | .9    |              |
|              | TOT %  | .2   | .3   | .1  | .1  | .1  | .1  | .1   | .1   | .0  | .0   | 1.0   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | *   | *   | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .1   | .2   | *   | .0  | *   | *   | .1   | .1   | .0  | .1   | .6    |              |
|              | TOT %  | .1   | .2   | *   | .0  | *   | .1  | .1   | .1   | .0  | .1   | .7    |              |
| 2<5          | PCP    | *    | *    | .1  | .1  | *   | .1  | *    | *    | .0  | *    | .4    |              |
|              | NO PCP | .2   | .1   | .1  | .1  | .1  | .1  | .1   | .1   | .0  | .1   | .9    |              |
|              | TOT %  | .3   | .2   | .1  | .1  | .1  | .2  | .2   | .1   | .0  | *    | 1.3   |              |
| 5<10         | PCP    | .7   | .7   | .4  | .2  | .2  | .3  | .5   | .5   | .0  | .0   | 3.5   |              |
|              | NO PCP | 6.0  | 7.9  | 2.2 | 1.1 | 1.1 | 2.1 | 2.8  | 3.1  | .0  | .6   | 27.0  |              |
|              | TOT %  | 6.7  | 8.6  | 2.6 | 1.3 | 1.3 | 2.5 | 3.3  | 3.6  | .0  | .6   | 30.5  |              |
| 10+          | PCP    | .3   | .4   | .1  | *   | .1  | .1  | .2   | .2   | .0  | *    | 1.3   |              |
|              | NO PCP | 15.6 | 18.7 | 5.6 | 2.6 | 3.0 | 4.6 | 6.2  | 7.0  | .0  | 1.7  | 65.1  |              |
|              | TOT %  | 15.9 | 19.1 | 5.7 | 2.6 | 3.1 | 4.7 | 6.4  | 7.2  | .0  | 1.7  | 66.4  |              |
| TOT OBS      |        |      |      |     |     |     |     |      |      |     |      |       | 8038         |
| TOT PCT      |        | 23.2 | 28.3 | 8.6 | 4.1 | 4.6 | 7.5 | 10.1 | 11.1 | .0  | 2.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0   | .0  | *    | *     |              |
|              | 4-10       | *    | *    | *   | *   | .0  | .0  | .0  | *    | .0  | *    | *     |              |
|              | 11-21      | .0   | *    | *   | *   | .0  | .0  | *   | *    | .0  | *    | *     |              |
|              | 22+        | .0   | *    | .0  | .0  | .0  | *   | .0  | .0   | .0  | *    | *     |              |
|              | TOT %      | *    | *    | *   | *   | .0  | *   | *   | *    | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | *    | *    | .0  | .0  | *   | .0  | *   | *    | .0  | *    | *     |              |
|              | 4-10       | .1   | .1   | *   | *   | .0  | .0  | *   | *    | .0  | *    | .3    |              |
|              | 11-21      | *    | .1   | *   | *   | .0  | *   | *   | *    | .0  | *    | .2    |              |
|              | 22+        | *    | *    | .0  | *   | *   | *   | *   | *    | .0  | *    | .1    |              |
|              | TOT %      | .1   | .2   | .1  | *   | *   | .1  | .1  | .1   | .0  | *    | .7    |              |
| 1<2          | 0-3        | *    | .0   | *   | *   | .0  | .0  | *   | .0   | .0  | .1   | .1    |              |
|              | 4-10       | *    | *    | *   | .0  | *   | *   | *   | *    | .0  | *    | .2    |              |
|              | 11-21      | .1   | .1   | *   | .0  | *   | *   | *   | *    | .0  | *    | .2    |              |
|              | 22+        | *    | *    | .0  | *   | *   | .1  | *   | .0   | .0  | *    | .1    |              |
|              | TOT %      | .1   | .1   | *   | *   | *   | .1  | .1  | *    | .0  | .1   | .6    |              |
| 2<5          | 0-3        | .0   | *    | *   | *   | .0  | .0  | *   | .0   | .0  | *    | .1    |              |
|              | 4-10       | .1   | .1   | *   | *   | .1  | .1  | .1  | .1   | .0  | *    | .5    |              |
|              | 11-21      | .1   | .1   | .1  | .1  | .1  | .1  | .1  | .1   | .0  | *    | .7    |              |
|              | 22+        | .1   | .1   | *   | *   | *   | .1  | *   | .1   | .0  | *    | .4    |              |
|              | TOT %      | .2   | .3   | .1  | .1  | .2  | .3  | .2  | .1   | .0  | *    | 1.6   |              |
| 5<10         | 0-3        | .3   | .3   | .1  | .1  | .1  | .1  | .1  | .2   | .0  | .5   | 1.7   |              |
|              | 4-10       | 2.0  | 2.3  | 1.0 | .5  | .4  | .8  | .9  | 1.1  | .0  |      | 8.8   |              |
|              | 11-21      | 2.2  | 3.3  | .8  | .4  | .5  | .8  | 1.0 | 1.0  | .0  |      | 10.0  |              |
|              | 22+        | .4   | .6   | .1  | .1  | .1  | .3  | .4  | .4   | .0  |      | 2.5   |              |
|              | TOT %      | 4.8  | 6.4  | 2.0 | 1.1 | 1.1 | 1.9 | 2.5 | 2.6  | .0  | .5   | 23.0  |              |
| 10+          | 0-3        | .8   | .9   | .6  | .4  | .3  | .5  | .6  | .7   | .0  | 2.2  | 6.9   |              |
|              | 4-10       | 8.7  | 9.3  | 3.7 | 2.0 | 1.8 | 2.3 | 2.9 | 4.4  | .0  |      | 35.3  |              |
|              | 11-21      | 6.4  | 9.8  | 2.3 | .8  | .9  | 1.6 | 2.4 | 2.8  | .0  |      | 27.2  |              |
|              | 22+        | 1.1  | 1.4  | .3  | .2  | .2  | .4  | .6  | .6   | .0  |      | 4.7   |              |
|              | TOT %      | 17.0 | 21.4 | 6.9 | 3.4 | 3.2 | 4.9 | 6.5 | 8.5  | .0  | 2.2  | 74.0  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |      |     |      |       | 13467        |
| TOT PCT      |            | 22.4 | 28.5 | 9.2 | 4.6 | 4.5 | 7.3 | 9.4 | 11.4 | .0  | 2.8  | 100.0 |              |



PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0002 MADEIRA ISLANDS  
32.6N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|---------------|
| 00003         | .2         | .0         | 1.1        | 6.4        | 11.4         | 10.2         | 3.8          | 1.8          | .3           | .6    | 35.8  | 64.2                | 1178          |
| 06009         | .5         | .2         | 1.0        | 8.1        | 16.0         | 10.8         | 3.5          | 2.0          | .7           | .4    | 43.1  | 56.9                | 1230          |
| 12015         | .2         | .2         | 1.1        | 5.6        | 12.2         | 9.5          | 6.2          | 2.1          | .4           | .6    | 38.2  | 61.8                | 1690          |
| 18021         | .0         | .1         | .7         | 5.7        | 11.6         | 9.0          | 5.0          | 1.2          | .6           | .4    | 34.5  | 65.5                | 1442          |
| TOT<br>PCT    | .2         | .1         | 1.0        | 6.4        | 12.7         | 9.8          | 4.8          | 1.8          | .5           | .5    | 37.9  | 62.1                | 5540<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS   |
|---------------|------|-------|-----|-----|------|------|----------------|
| 00003         | .1   | .3    | .3  | 2.0 | 20.2 | 76.9 | 2733           |
| 06009         | .2   | .8    | .6  | 2.1 | 27.0 | 69.3 | 3970           |
| 12015         | .1   | .6    | .8  | 1.0 | 22.1 | 75.3 | 3111           |
| 18021         | *    | .9    | .5  | 1.3 | 23.6 | 73.7 | 4004           |
| TOT<br>PCT    | .1   | .7    | .6  | 1.6 | 23.6 | 73.4 | 13818<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS  |
|---------------|--------------|------------|-------------|-----------------|--------------------|---------------|
| 00003         | .2           | 1.4        | 10.0        | 27.7            | 62.3               | 1117          |
| 06009         | .4           | 1.8        | 11.9        | 32.7            | 55.4               | 1171          |
| 12015         | .2           | 1.7        | 8.0         | 31.3            | 60.6               | 1643          |
| 18021         | .0           | 1.0        | 7.6         | 27.9            | 64.5               | 1408          |
| TOT<br>PCT    | .2           | 1.4        | 9.2         | 30.0            | 60.8               | 5339<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89        | .0   | .0    | .0    | .0    | .0    | .0    | *     | .0     | *            | *           |
| 80/84        | .0   | .0    | .0    | *     | .1    | .2    | .1    | .0     | .4           | .4          |
| 75/79        | .0   | .0    | *     | .4    | 1.5   | 2.4   | 1.0   | .3     | 5.6          | 5.6         |
| 70/74        | .0   | .0    | *     | .7    | 5.3   | 9.1   | 9.6   | 3.6    | 28.2         | 28.2        |
| 65/69        | .0   | .0    | .1    | 1.1   | 4.5   | 10.1  | 10.1  | 4.1    | 29.9         | 29.9        |
| 60/64        | .0   | .0    | .1    | 1.8   | 7.6   | 10.7  | 8.6   | 3.2    | 31.9         | 31.9        |
| 55/59        | .0   | .0    | *     | .2    | 1.1   | 1.2   | .9    | .5     | 3.9          | 3.9         |
| 50/54        | .0   | .0    | .0    | .0    | *     | *     | *     | *      | .1           | .1          |
| TOTAL<br>PCT | .0   | .0    | .2    | 4.2   | 20.0  | 33.6  | 30.3  | 11.6   | 5492         | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|------|-----|------|
| .0   | .0   | .0  | .0  | *   | *   | .0  | .0   | .0  | .0   |
| .1   | .1   | *   | .0  | .0  | .0  | .1  | *    | .0  | .1   |
| 1.2  | 1.9  | .6  | .2  | .2  | .3  | .4  | .5   | .0  | .2   |
| 7.5  | 9.5  | 1.9 | .8  | 1.0 | 1.9 | 2.0 | 2.4  | .0  | 1.2  |
| 6.2  | 7.6  | 2.7 | 1.5 | 2.0 | 2.9 | 3.6 | 2.6  | .0  | .8   |
| 6.7  | 8.6  | 3.0 | 1.4 | 1.4 | 2.1 | 3.5 | 4.4  | .0  | .7   |
| 1.0  | 1.1  | .3  | .1  | .1  | .1  | .3  | .7   | .0  | .1   |
| *    | .0   | .0  | .0  | .0  | .0  | *   | .0   | .0  | *    |
| 22.9 | 28.8 | 8.5 | 4.0 | 4.7 | 7.3 | 9.9 | 10.7 | .0  | 3.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 71  | 69  | 66  | 62 | 59 | 50  | 65.6 | 4489         |
| 06009         | 84  | 72  | 70  | 66  | 62 | 60 | 50  | 65.6 | 7471         |
| 12015         | 84  | 76  | 73  | 68  | 64 | 61 | 50  | 68.4 | 4656         |
| 18021         | 86  | 75  | 72  | 67  | 63 | 61 | 52  | 67.3 | 7581         |
| TOT           | 86  | 75  | 72  | 66  | 62 | 60 | 50  | 66.7 | 24197        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.8   | 13.6  | 31.2  | 36.5  | 15.8   | 79   | 1167         |
| 06009         | .0   | 2.6   | 17.3  | 31.7  | 34.1  | 14.2   | 78   | 1460         |
| 12015         | .0   | 7.1   | 25.2  | 34.4  | 25.1  | 8.2    | 75   | 1674         |
| 18021         | .0   | 4.4   | 21.8  | 36.1  | 28.3  | 9.4    | 76   | 1387         |
| TOT           | 0    | 26.1  | 114.6 | 189.2 | 171.5 | 67.4   | 77   | 5688         |

PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

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32.6N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .1       | .0       | .1       | 10    | .0       | .1        |
| 9/10               | .0       | .0       | .0       | *        | *        | .1       | .1       | .1       | *        | 28    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .3       | .2       | .2       | *        | 60    | *        | .8        |
| 6                  | .0       | .0       | .0       | *        | .1       | .2       | .2       | .2       | *        | 60    | .1       | .7        |
| 5                  | .0       | .0       | .0       | .1       | .3       | .5       | .3       | .4       | *        | 126   | *        | 1.6       |
| 4                  | .0       | .0       | *        | .2       | .7       | .7       | .7       | .4       | .0       | 194   | *        | 2.6       |
| 3                  | .0       | *        | .0       | .4       | 1.1      | .9       | 1.1      | .3       | .0       | 282   | .2       | 3.5       |
| 2                  | .0       | .0       | *        | .7       | 2.2      | 1.7      | 1.9      | .2       | .0       | 496   | .2       | 6.5       |
| 1                  | .0       | .0       | .1       | 1.9      | 2.9      | 2.4      | 2.3      | .1       | .0       | 734   | .2       | 9.6       |
| 0                  | .0       | .0       | .2       | 4.0      | 4.3      | 4.9      | 2.7      | .1       | .0       | 1218  | .2       | 16.1      |
| -1                 | .0       | .0       | .5       | 5.5      | 4.3      | 5.3      | 1.4      | *        | .0       | 1270  | .2       | 16.8      |
| -2                 | .0       | *        | 1.1      | 5.3      | 3.2      | 3.3      | .6       | *        | .0       | 1042  | .2       | 13.4      |
| -3                 | .0       | *        | 1.4      | 4.1      | 2.6      | 2.1      | .3       | *        | .0       | 798   | .1       | 10.4      |
| -4                 | .0       | *        | 1.5      | 2.7      | 1.7      | .9       | .1       | .0       | .0       | 531   | *        | 7.0       |
| -5                 | .0       | .1       | 1.1      | 1.5      | .8       | .4       | .1       | .0       | .0       | 303   | *        | 4.0       |
| -6                 | .0       | .1       | .8       | .8       | .4       | .2       | .1       | .0       | .0       | 170   | *        | 2.2       |
| -7/-8              | .0       | .2       | .5       | .5       | .3       | .1       | *        | .0       | .0       | 130   | .0       | 1.7       |
| -9/-10             | *        | .1       | .3       | .3       | *        | .0       | .0       | .0       | .0       | 53    | .0       | .7        |
| -11/-13            | *        | .1       | *        | .1       | *        | .0       | .0       | .0       | .0       | 21    | .0       | .3        |
| -14/-16            | *        | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| TOTAL              |          |          |          |          |          |          |          |          |          | 7528  |          |           |
| PCT                | *        | .5       | 7.6      | 28.2     | 25.1     | 24.0     | 12.3     | 7.0      | .2       | 100.0 | 1.5      | 98.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 1.2  | .2    | .0    | .0    | .0  | 1.8  | .3  | 1.2  | .1    | .0    | .0    | .0  | 1.6  |
| 1-2     | .1  | 6.1  | 1.9   | .0    | .0    | .0  | 8.1  | .2  | 5.4  | 2.1   | .0    | .0    | .0  | 7.7  |
| 3-4     | .1  | 2.8  | 3.8   | .3    | .0    | .0  | 7.0  | .1  | 3.2  | 6.5   | .2    | .0    | .0  | 10.0 |
| 5-6     | .0  | .6   | 3.0   | .3    | .0    | .0  | 3.8  | .0  | .6   | 5.3   | .7    | .0    | .0  | 6.5  |
| 7       | .0  | .4   | 1.2   | .6    | .0    | .0  | 2.2  | .0  | .1   | 1.3   | .6    | .0    | .0  | 2.0  |
| 8-9     | .0  | .0   | .2    | .4    | *     | .0  | .6   | .0  | *    | .5    | .3    | .1    | .0  | .9   |
| 10-11   | .0  | .0   | .1    | .7    | *     | .0  | .8   | .0  | .0   | .1    | .2    | .0    | .0  | .3   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | *    |
| 13-16   | .0  | .0   | *     | *     | *     | .0  | .1   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 11.1 | 10.4  | 2.3   | .1    | .0  | 24.6 | .6  | 10.5 | 15.8  | 2.2   | .1    | .0  | 29.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .5   | .0    | .0    | .0    | .0  | .8  | .1  | .4   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .1  | 2.0  | .5    | .0    | .0    | .0  | 2.6 | .1  | .9   | .4    | .0    | .0    | .0  | 1.4 |
| 3-4     | .0  | .8   | 1.7   | *     | .0    | .0  | 2.5 | *   | .4   | .5    | .1    | .0    | .0  | 1.0 |
| 5-6     | .0  | .2   | .9    | .1    | .0    | .0  | 1.2 | .0  | *    | .3    | *     | .0    | .0  | .4  |
| 7       | .0  | .1   | .1    | .1    | .0    | .0  | .4  | .0  | .0   | .1    | .1    | .0    | .0  | .1  |
| 8-9     | .0  | .1   | .0    | .2    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | *     | .0  | .2  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 13-16   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 3.6  | 3.3   | .5    | *     | .0  | 7.9 | .2  | 1.8  | 1.3   | .3    | *     | .0  | 3.7 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|---------|
| <1      | .3  | .3   | .0    | .0    | .0    | .0  | .6  | .2  | .6   | .0    | .0    | .0    | .0  | .9  |         |
| 1-2     | .1  | 1.1  | .4    | .0    | .0    | .0  | 1.6 | .0  | 1.3  | .7    | .0    | .0    | .0  | 2.0 |         |
| 3-4     | .0  | .4   | .8    | .1    | .0    | .0  | 1.3 | .0  | .9   | 1.2   | .2    | .0    | .0  | 2.3 |         |
| 5-6     | .0  | .1   | .4    | .1    | .0    | .0  | .5  | .0  | .2   | .9    | .2    | .0    | .0  | 1.3 |         |
| 7       | .0  | .0   | .3    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .3    | .0    | .0  | .9  |         |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .2    | .2    | .0    | .0  | .4  |         |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .2  |         |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| TOT PCT | .3  | 1.9  | 1.9   | .4    | .0    | .0  | 4.6 | .3  | 3.0  | 3.5   | 1.1   | .1    | .0  | 8.1 |         |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|---------|
| <1      | .2  | .6   | .0    | .0    | .0    | .0  | .9  | .2  | 1.1  | .1    | .0    | .0    | .0  | 1.4  |         |
| 1-2     | .1  | 1.5  | .5    | .0    | .0    | .0  | 2.0 | .3  | 2.0  | .8    | .0    | .0    | .0  | 3.1  |         |
| 3-4     | .0  | .7   | 1.7   | .1    | .0    | .0  | 2.5 | .1  | 1.0  | 1.6   | .0    | .0    | .0  | 2.8  |         |
| 5-6     | .0  | .2   | 1.0   | .2    | .0    | .0  | 1.5 | .0  | .3   | 1.0   | .1    | .0    | .0  | 1.4  |         |
| 7       | .0  | .1   | .7    | .3    | .0    | .0  | 1.2 | .0  | .1   | .4    | .2    | .0    | .0  | .7   |         |
| 8-9     | .0  | .0   | .1    | .2    | .1    | .0  | .4  | .0  | .0   | .2    | .1    | .0    | .0  | .3   |         |
| 10-11   | .0  | .0   | .0    | .0    | .1    | .1  | .2  | .0  | .0   | .2    | .1    | .0    | .0  | .2   |         |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |         |
| 13-16   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .1    | .1    | .1    | .0  | .3   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1   |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |         |
| TOT PCT | .4  | 3.2  | 4.1   | .9    | .2    | .1  | 8.9 | .6  | 4.6  | 4.3   | .6    | .3    | .0  | 10.4 | 97.3    |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 5.4 | 6.1  | .4    | .0    | .0    | .0  | 11.9  |         |
| 1-2     | 1.1 | 20.1 | 7.2   | .0    | .0    | .0  | 28.4  |         |
| 3-4     | .4  | 10.2 | 17.4  | 1.0   | .0    | .0  | 28.9  |         |
| 5-6     | .1  | 2.2  | 12.5  | 1.6   | .0    | .0  | 16.5  |         |
| 7       | .0  | .7   | 4.8   | 2.2   | .1    | .0  | 7.8   |         |
| 8-9     | .0  | .2   | 1.1   | 1.6   | .2    | .0  | 3.1   |         |
| 10-11   | .0  | .0   | .5    | 1.3   | .2    | .1  | 2.1   |         |
| 12      | .0  | .0   | .0    | .4    | .0    | .0  | .5    |         |
| 13-16   | .0  | .0   | .1    | .3    | .3    | .0  | .7    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.0 | 39.6 | 44.0  | 8.3   | .9    | .1  | 100.0 | 2678    |

PERIOD: (OVER-ALL) 1949-1969

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | 1.8 | 7.9  | 13.5 | 6.0  | 2.2  | .8  | .5    | .1  | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1440        | 4 |
| 6-7             | *   | 1.3  | 6.4  | 8.4  | 4.7  | 2.0 | 1.0   | .3  | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1077        | 5 |
| 8-9             | *   | .3   | 1.8  | 3.8  | 4.1  | 2.0 | 1.3   | .5  | .6    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 663         | 7 |
| 10-11           | .0  | .4   | .8   | 1.4  | 1.8  | 1.3 | .7    | .5  | .5    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 350         | 7 |
| 12-13           | .0  | .0   | .7   | .3   | .7   | .5  | .4    | .1  | .2    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 141         | 7 |
| >13             | .0  | .0   | .0   | .3   | .4   | .2  | .3    | .1  | .2    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 75          | 9 |
| INDET           | 2.2 | 2.7  | 3.4  | 3.3  | 1.8  | 1.2 | .7    | .3  | .4    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 715         | 5 |
| TOTAL           |     |      |      |      |      |     |       |     |       |       |       |       |       |       |       |       |       |       |     |       | 4461        | 5 |
| PCT             | 4.1 | 12.6 | 26.6 | 23.4 | 15.8 | 8.1 | 4.9   | 1.9 | 2.2   | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |



PERIOD: (PRIMARY) 1890-1973  
(OVER-ALL) 1854-1973

AREA 0002 MADEIRA ISLANDS  
32.0N 16.0W

TABLE 20

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

| SEA TMP<br>DEG F | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANN   | PCT   |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| 96+              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 95/96            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 93/94            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 91/92            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 89/90            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 87/88            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 85/86            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 83/84            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .1   | .0   | .0   | .0   | 1     | *     |
| 81/82            | .0   | .0   | .0   | .0   | .0   | .0   | .1   | .2   | .1   | *    | .0   | .0   | 7     | *     |
| 79/80            | .0   | .0   | .0   | .0   | .0   | *    | .1   | .4   | .4   | .1   | .0   | .0   | 21    | .1    |
| 77/78            | .0   | .0   | .0   | .0   | .0   | .1   | .3   | 1.0  | 2.2  | .8   | .2   | .0   | 90    | .4    |
| 75/76            | .0   | .0   | .0   | .0   | .0   | .1   | 1.8  | 9.2  | 11.1 | 4.8  | .5   | .0   | 538   | 2.3   |
| 73/74            | .0   | .1   | .1   | .2   | .2   | 2.1  | 11.6 | 35.0 | 45.7 | 23.2 | 2.2  | .2   | 2376  | 10.2  |
| 71/72            | .4   | .4   | .1   | .2   | .8   | 7.8  | 33.0 | 40.0 | 33.4 | 42.1 | 13.2 | 1.4  | 3428  | 14.7  |
| 69/70            | .9   | .3   | .2   | .9   | 3.2  | 21.6 | 35.0 | 12.5 | 6.0  | 21.4 | 33.6 | 5.1  | 2776  | 11.9  |
| 67/68            | 4.7  | 2.5  | 2.4  | 4.3  | 13.5 | 38.0 | 14.2 | 1.5  | 1.2  | 6.2  | 31.1 | 22.8 | 2809  | 12.0  |
| 65/66            | 28.0 | 10.7 | 11.2 | 16.5 | 35.8 | 23.3 | 3.4  | .2   | .0   | 1.1  | 13.8 | 41.6 | 3598  | 15.4  |
| 63/64            | 46.9 | 46.2 | 43.5 | 47.4 | 37.9 | 6.5  | .5   | .1   | .1   | .3   | 4.6  | 24.9 | 4953  | 21.2  |
| 61/62            | 15.1 | 31.3 | 32.2 | 22.3 | 7.3  | .2   | .0   | .0   | .0   | .0   | .6   | 3.5  | 2133  | 9.1   |
| 59/60            | 2.9  | 6.7  | 8.7  | 6.7  | 1.2  | *    | .0   | .0   | .0   | .0   | .1   | .2   | 503   | 2.2   |
| 57/58            | .4   | 1.0  | 1.5  | 1.0  | .2   | .1   | .0   | .0   | .0   | .0   | .0   | .2   | 85    | .4    |
| 55/56            | .7   | .6   | .2   | .5   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 37    | .2    |
| 53/54            | .0   | .3   | .0   | .1   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 6     | *     |
| 51/52            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 49/50            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 47/48            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 45/46            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 43/44            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 41/42            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 39/40            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 37/38            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 35/36            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 33/34            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 31/32            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 29/30            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 27/28            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| <27              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| TOTAL            | 1685 | 1863 | 1903 | 1969 | 2289 | 2182 | 1960 | 1918 | 1912 | 2160 | 1785 | 1735 | 23361 | 100.0 |
| MEAN             | 63.8 | 62.8 | 62.7 | 63.3 | 64.8 | 67.6 | 70.3 | 72.3 | 72.8 | 71.4 | 68.4 | 65.6 | 67.1  |       |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000 | 0300 | 0600 | 0900 | 1200 | 1500 | 1800 | 2100 | MEAN | TOTAL<br>OBS |
|-----|------|------|------|------|------|------|------|------|------|--------------|
| JAN | 1021 | 1023 | 1022 | 1024 | 1022 | 1016 | 1021 | 1022 | 1022 | 985          |
| FEB | 1020 | 1019 | 1019 | 1021 | 1019 | 1014 | 1019 | 1020 | 1019 | 1066         |
| MAR | 1020 | 1020 | 1019 | 1019 | 1020 | 1019 | 1019 | 1020 | 1019 | 1176         |
| APR | 1019 | 1020 | 1019 | 1019 | 1020 | 1021 | 1019 | 1019 | 1019 | 1128         |
| MAY | 1020 | 1019 | 1019 | 1020 | 1021 | 1019 | 1020 | 1021 | 1020 | 1208         |
| JUN | 1021 | 1020 | 1021 | 1021 | 1022 | 1017 | 1021 | 1022 | 1021 | 1076         |
| JUL | 1022 | 1019 | 1020 | 1021 | 1021 | 1021 | 1021 | 1021 | 1021 | 884          |
| AUG | 1020 | 1016 | 1019 | 1020 | 1020 | 1020 | 1020 | 1021 | 1020 | 943          |
| SEP | 1020 | 1019 | 1019 | 1020 | 1021 | 1020 | 1019 | 1020 | 1020 | 1022         |
| OCT | 1018 | 1018 | 1018 | 1018 | 1019 | 1016 | 1018 | 1018 | 1018 | 1197         |
| NOV | 1018 | 1012 | 1017 | 1018 | 1019 | 1010 | 1018 | 1019 | 1018 | 876          |
| DEC | 1022 | 1020 | 1022 | 1021 | 1022 | 1024 | 1021 | 1023 | 1022 | 1008         |
| ANN | 1020 | 1019 | 1020 | 1020 | 1021 | 1018 | 1020 | 1021 | 1020 | 12569        |
| OBS | 2392 | 89   | 2531 | 1063 | 2785 | 83   | 2576 | 1050 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 996  | 998  | 1007 | 1017 | 1023 | 1027 | 1031 | 1034 | 1037 |
| FEB | 996  | 1000 | 1006 | 1014 | 1020 | 1025 | 1030 | 1033 | 1036 |
| MAR | 997  | 1001 | 1008 | 1015 | 1020 | 1024 | 1029 | 1031 | 1034 |
| APR | 997  | 1000 | 1009 | 1016 | 1020 | 1023 | 1027 | 1029 | 1034 |
| MAY | 1002 | 1008 | 1012 | 1018 | 1021 | 1023 | 1026 | 1027 | 1033 |
| JUN | 1006 | 1010 | 1016 | 1019 | 1021 | 1023 | 1026 | 1029 | 1031 |
| JUL | 1012 | 1015 | 1016 | 1020 | 1021 | 1023 | 1025 | 1027 | 1029 |
| AUG | 1012 | 1013 | 1015 | 1018 | 1020 | 1022 | 1024 | 1026 | 1029 |
| SEP | 1003 | 1009 | 1014 | 1018 | 1020 | 1022 | 1025 | 1027 | 1030 |
| OCT | 1000 | 1003 | 1008 | 1015 | 1019 | 1022 | 1025 | 1028 | 1032 |
| NOV | 996  | 998  | 1005 | 1014 | 1019 | 1023 | 1027 | 1030 | 1033 |
| DEC | 995  | 1001 | 1009 | 1018 | 1023 | 1026 | 1031 | 1033 | 1037 |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            | NO SIG WEA |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FUG WD PCPN | FUG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |            |
| N        | 1.0                | 2.0       | .8   | .0        | .0   | .0              | .0   | 3.8                     | 2.4            | .2        | 1.3         | .0                  | .1         | .0              | .0         | 92.2       |
| NE       | .4                 | 1.0       | .5   | .0        | .0   | .0              | .0   | 1.8                     | 1.9            | .2        | .5          | .0                  | .3         | .1              | .1         | 95.1       |
| E        | .2                 | .7        | .2   | .0        | .0   | .0              | .0   | 1.1                     | 1.3            | .5        | 1.3         | .0                  | 1.1        | .0              | .0         | 94.7       |
| SE       | .5                 | .4        | .5   | .0        | .0   | .0              | .0   | 1.3                     | 2.0            | .1        | .6          | .0                  | .8         | .9              | .9         | 94.2       |
| S        | 3.5                | 2.0       | 1.3  | .0        | .0   | .0              | .0   | 6.6                     | 2.7            | 1.5       | 1.0         | .0                  | .5         | .1              | .1         | 88.0       |
| SW       | 1.8                | 2.4       | 2.3  | .0        | .0   | .0              | .0   | 6.3                     | 4.7            | 1.9       | .6          | .0                  | .7         | .0              | .0         | 85.9       |
| W        | 1.5                | 1.8       | 1.3  | .0        | .0   | .0              | .0   | 4.7                     | 2.2            | 2.1       | .0          | .0                  | .0         | .0              | .0         | 91.0       |
| NW       | 1.5                | 2.8       | 1.4  | .0        | .0   | .0              | .0   | 5.7                     | 2.0            | .2        | .7          | .0                  | .3         | .3              | .3         | 90.8       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .6        | 1.3         | .0                  | 3.2        | .0              | .0         | 94.9       |
| TOT PCT  | 1.0                | 1.4       | .9   | .0        | .0   | .0              | .0   | 3.3                     | 2.3            | .7        | .8          | .0                  | .6         | .1              | .1         | 92.4       |
| TOT OBS: | 5354               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            | NO SIG WEA |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FUG WD PCPN | FUG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |            |
| 00003      | .6                 | 1.2       | .8   | .0        | .0   | .0              | .0   | 2.7                     | 1.9            | 1.2       | .7          | .0                  | .7         | .1              | .1         | 92.9       |
| 06009      | 1.5                | 1.9       | 1.0  | .0        | .0   | .0              | .0   | 4.4                     | 2.5            | .9        | .9          | .0                  | .4         | .2              | .2         | 90.3       |
| 12015      | .7                 | 1.0       | .6   | .0        | .0   | .0              | .0   | 2.2                     | 2.2            | .1        | .4          | .0                  | .5         | .1              | .1         | 94.4       |
| 18021      | 1.2                | 1.4       | 1.0  | .0        | .0   | .0              | .0   | 3.5                     | 2.2            | .5        | 1.2         | .0                  | .6         | .1              | .1         | 91.3       |
| TOT PCT    | 1.0                | 1.4       | .9   | .0        | .0   | .0              | .0   | 3.2                     | 2.2            | .7        | .8          | .0                  | .5         | .1              | .1         | 92.5       |
| TOT OBS:   | 5505               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .7                 | 6.6  | 6.0   | 1.5   | .2    | .0  |       | 15.1      | 12.5     |          | 15.5       | 10.6  | 15.1  | 15.7  | 14.6  | 15.2  | 15.4  | 14.8  |
| NE       | 1.0                | 12.0 | 13.1  | 2.4   | .1    | *   |       | 28.7      | 12.5     |          | 29.0       | 23.8  | 28.7  | 28.5  | 28.6  | 26.2  | 29.4  | 28.0  |
| E        | .7                 | 6.7  | 4.6   | .4    | *     | *   |       | 12.5      | 10.3     |          | 12.3       | 18.3  | 12.5  | 15.1  | 12.0  | 12.0  | 11.2  | 14.0  |
| SE       | .6                 | 4.8  | 3.6   | .5    | .1    | *   |       | 9.5       | 10.8     |          | 9.1        | 13.5  | 8.9   | 9.7   | 10.7  | 10.6  | 9.2   | 9.0   |
| S        | .6                 | 3.6  | 3.3   | .7    | .1    | .0  |       | 8.2       | 11.8     |          | 8.1        | 7.5   | 8.3   | 6.1   | 8.8   | 8.7   | 9.1   | 7.2   |
| SW       | .6                 | 3.6  | 3.1   | 1.0   | .1    | *   |       | 8.3       | 12.2     |          | 8.0        | 8.7   | 8.4   | 6.5   | 8.9   | 10.1  | 9.2   | 7.1   |
| W        | .6                 | 3.0  | 2.4   | .7    | .1    | *   |       | 6.8       | 11.9     |          | 6.9        | 6.2   | 6.0   | 7.0   | 7.1   | 8.2   | 6.6   | 7.6   |
| NW       | .6                 | 3.5  | 2.7   | .9    | .1    | .0  |       | 7.8       | 12.2     |          | 7.4        | 10.0  | 7.7   | 9.6   | 7.2   | 7.5   | 7.8   | 8.3   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.0                |      |       |       |       |     |       | 3.0       | .0       |          | 3.6        | 1.5   | 4.2   | 1.9   | 2.1   | 1.4   | 2.3   | 4.0   |
| TOT OBS  | 851                | 4469 | 3965  | 831   | 78    | 4   | 10198 |           | 11.6     |          | 1976       | 130   | 1989  | 939   | 2133  | 146   | 1984  | 901   |
| TOT PCT  | 8.3                | 43.8 | 38.9  | 8.1   | .8    | *   |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 3.2                | 7.8  | 3.4   | .6    | .1  |           | 15.1     | 12.5     | 15.2       | 15.3  | 14.6  | 15.2  |    |
| NE       | 4.8                | 16.9 | 6.0   | .9    | .1  |           | 28.7     | 12.5     | 28.7       | 28.7  | 28.4  | 28.9  |    |
| E        | 3.5                | 7.4  | 1.5   | .1    | *   |           | 12.5     | 10.3     | 12.7       | 13.3  | 12.0  | 12.0  |    |
| SE       | 2.4                | 5.6  | 1.3   | .1    | *   |           | 9.5      | 10.8     | 9.4        | 9.2   | 10.7  | 9.2   |    |
| S        | 2.1                | 4.1  | 1.8   | .2    | *   |           | 8.2      | 11.8     | 8.0        | 7.6   | 8.8   | 8.3   |    |
| SW       | 2.2                | 3.8  | 2.0   | .3    | *   |           | 8.3      | 12.2     | 8.1        | 7.8   | 9.0   | 8.5   |    |
| W        | 1.9                | 3.2  | 1.5   | .3    | *   |           | 6.8      | 11.9     | 6.9        | 6.3   | 7.2   | 6.9   |    |
| NW       | 1.9                | 3.9  | 1.8   | .3    | .0  |           | 7.8      | 12.2     | 7.5        | 8.3   | 7.3   | 7.9   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.0                |      |       |       |     |           | 3.0      | .0       | 3.5        | 3.5   | 2.1   | 2.8   |    |
| TOT OBS  | 2547               | 5383 | 1962  | 284   | 22  | 10198     |          | 11.6     | 2106       | 2928  | 2279  | 2885  |    |
| TOT PCT  | 25.0               | 52.8 | 19.2  | 2.8   | .2  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | 3.5  | 5.1 | 46.2 | 37.1               | 7.5   | .7    | .0  | 11.2  | 100.0    | 2106      |
| 06009 | 3.5  | 5.5 | 45.0 | 37.4               | 7.8   | .8    | *   | 11.3  | 100.0    | 2928      |
| 12015 | 2.1  | 5.1 | 41.8 | 42.0               | 8.3   | .7    | *   | 11.9  | 100.0    | 2279      |
| 18021 | 2.8  | 5.7 | 42.4 | 39.2               | 8.9   | .9    | .1  | 11.8  | 100.0    | 2885      |
| TOT   | 303  | 548 | 4469 | 3965               | 831   | 78    | 4   | 11.6  |          | 10198     |
| PCT   | 3.0  | 5.4 | 43.8 | 38.9               | 8.1   | .8    | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 3.8  | 3.8  | 4.9  | 2.1        |              | 4.3                    |
| NE       | 8.0  | 6.2  | 9.5  | 4.7        |              | 4.3                    |
| E        | 4.5  | 2.2  | 3.1  | 1.3        |              | 3.6                    |
| SE       | 3.9  | 1.5  | 3.1  | 1.8        |              | 4.0                    |
| S        | 2.3  | 1.7  | 3.3  | 2.1        |              | 4.7                    |
| SW       | 2.7  | 2.2  | 3.6  | 1.8        |              | 4.5                    |
| W        | 2.0  | 1.7  | 1.8  | .9         |              | 4.1                    |
| NW       | 1.5  | 1.7  | 1.9  | 1.0        |              | 4.4                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | 1.5  | .4   | .8   | .5         |              | 3.4                    |
| TOT OBS  | 1337 | 942  | 1418 | 710        | 4407         | 4.2                    |
| TOT PCT  | 30.3 | 21.4 | 32.2 | 16.1       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | *          | .0         | .1         | .5         | 2.1          | 1.7          | .9           | .2           | .1           | .1    | 8.9                |              |
| NE      | .0         | *          | .2         | 1.0        | 4.5          | 4.0          | 1.8          | .4           | .1           | .1    | 16.4               |              |
| E       | *          | .0         | *          | .2         | 1.0          | 1.3          | .4           | .1           | *            | .1    | 7.8                |              |
| SE      | *          | *          | *          | .1         | 1.2          | .7           | .4           | .1           | .1           | .3    | 7.3                |              |
| S       | *          | *          | .1         | .4         | 1.3          | .7           | .3           | .2           | .1           | .3    | 6.0                |              |
| SW      | *          | .0         | .2         | .5         | 1.0          | .9           | .4           | .1           | .0           | .2    | 6.9                |              |
| W       | .0         | .0         | *          | .3         | .8           | .5           | .1           | .1           | .1           | .1    | 4.4                |              |
| NW      | .0         | .0         | .0         | .1         | .8           | .8           | .3           | .1           | *            | .1    | 3.9                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | *          | *          | .0         | *          | .2           | .2           | .1           | .0           | .1           | *     | 2.5                |              |
| TOT OBS | 8          | 3          | 25         | 140        | 566          | 484          | 210          | 55           | 30           | 53    | 2833               | 4407         |
| TOT PCT | .2         | .1         | .6         | 3.2        | 12.8         | 11.0         | 4.8          | 1.2          | .7           | 1.2   | 64.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.6         | 1.9        | 1.9        | 1.9        | 1.9          | 1.9          | 1.9           | 1.9        |
| = OR >5000        | 2.7         | 3.2        | 3.2        | 3.2        | 3.2          | 3.2          | 3.2           | 3.2        |
| = OR >3500        | 6.6         | 7.7        | 7.8        | 7.9        | 7.9          | 7.9          | 7.9           | 7.9        |
| = OR >2000        | 15.9        | 18.5       | 18.8       | 18.8       | 18.8         | 18.9         | 18.9          | 18.9       |
| = OR >1000        | 27.0        | 31.0       | 31.5       | 31.5       | 31.6         | 31.6         | 31.6          | 31.6       |
| = OR >600         | 29.4        | 34.0       | 34.6       | 34.7       | 34.7         | 34.7         | 34.7          | 34.7       |
| = OR >300         | 29.8        | 34.4       | 35.0       | 35.2       | 35.3         | 35.3         | 35.3          | 35.3       |
| = OR >150         | 29.8        | 34.5       | 35.1       | 35.3       | 35.3         | 35.3         | 35.3          | 35.3       |
| = OR >0           | 29.8        | 34.5       | 35.2       | 35.4       | 35.5         | 35.5         | 35.5          | 35.5       |
| TOTAL             | 1338        | 1551       | 1582       | 1591       | 1594         | 1595         | 1595          | 1596       |

TOTAL NUMBER OF OBS: 4490

PCT FREQ NH <5/8: 64.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1   | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS | TOTAL<br>OBS |
|--|------|-----|------|------|------|-----|-----|-----|------|-----|--------------|
|  | 18.0 | 9.9 | 12.7 | 12.5 | 10.3 | 7.5 | 8.1 | 8.4 | 12.4 | .2  | 4771         |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0   | *     | *            |
|              | NO PCP | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0   | *     | *            |
|              | TOT %  | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0   | *     | *            |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0   | .1   | *    | .0  | *   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .0   | .0   | *    | .1   | .1   | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %  | .0   | .0   | .0   | *    | .1   | .1   | .0  | *   | .0  | .0   | .2    |              |
| 1<2          | PCP    | .0   | *    | .0   | *    | *    | .1   | .0  | .0  | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .0   | *    | *    | *    | *    | .0  | *   | .0  | .0   | .1    |              |
|              | TOT %  | .0   | *    | *    | *    | .1   | .1   | .0  | *   | .0  | .0   | .2    |              |
| 2<5          | PCP    | *    | *    | *    | *    | .1   | .1   | *   | .1  | .0  | .0   | .4    |              |
|              | NO PCP | .1   | .1   | .1   | .2   | .2   | .2   | .1  | .1  | .0  | *    | 1.0   |              |
|              | TOT %  | .1   | .2   | .1   | .2   | .3   | .3   | .1  | .1  | .0  | *    | 1.4   |              |
| 5<10         | PCP    | .3   | .3   | .1   | .1   | .3   | .4   | .1  | .2  | .0  | .0   | 1.6   |              |
|              | NO PCP | 1.9  | 3.1  | 1.6  | 1.7  | 1.5  | 1.4  | .9  | .8  | .0  | .5   | 13.4  |              |
|              | TOT %  | 2.2  | 3.4  | 1.6  | 1.8  | 1.8  | 1.8  | 1.1 | 1.0 | .0  | .5   | 15.1  |              |
| 10+          | PCP    | .2   | .2   | .1   | *    | .2   | .1   | .1  | .1  | .0  | .0   | 1.1   |              |
|              | NO PCP | 12.2 | 23.8 | 9.2  | 8.6  | 7.6  | 7.7  | 5.3 | 5.1 | .0  | 2.4  | 82.0  |              |
|              | TOT %  | 12.5 | 24.0 | 9.3  | 8.6  | 7.8  | 7.8  | 5.5 | 5.2 | .0  | 2.4  | 83.1  |              |
| TOT OBS      |        |      |      |      |      |      |      |     |     |     |      |       |              |
| TOT PCT      |        | 14.7 | 27.6 | 11.1 | 10.6 | 10.0 | 10.0 | 6.6 | 6.4 | .0  | 3.0  | 100.0 | 5339         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE   | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|------|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | .0   | .0   | .0  | .0  | *   | .0  | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0   | .0   | .0  | *   | .0  | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .0   | .0   | .0  | *   | *   | .0  | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0   | *   | *   | .0  | *   | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0   | .0   | *   | *   | *   | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | *    | .1  | *   | *   | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .0   | .0   | .0   | *    | .1  | .1  | *   | *   | .0  | .0   | .2    |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | *    | *    | .0   | .0  | *   | .0  | .0  | .0  | .0   | *     |              |
|              | 11-21      | .0   | *    | *    | *    | *   | *   | .0  | *   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | *    | *   | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | .0   | .0   | *    | *    | *   | .1  | .0  | *   | .0  | .0   | .2    |              |
| 2<5          | 0-3        | .0   | .0   | *    | *    | .0  | *   | .0  | .0  | .0  | *    | .1    |              |
|              | 4-10       | .1   | .1   | .1   | *    | *   | .1  | *   | .1  | .0  | .0   | .4    |              |
|              | 11-21      | .1   | .1   | .1   | .1   | .1  | .1  | .1  | .1  | .0  | .0   | .7    |              |
|              | 22+        | *    | *    | *    | .1   | .1  | *   | *   | *   | .0  | .0   | .3    |              |
|              | TOT %      | .1   | .2   | .1   | .2   | .2  | .2  | .2  | .1  | .0  | *    | 1.5   |              |
| 5<10         | 0-3        | .1   | .2   | .1   | *    | .1  | .1  | .1  | .1  | .0  | .5   | 1.1   |              |
|              | 4-10       | .7   | 1.1  | .7   | .7   | .4  | .6  | .3  | .4  | .0  | .0   | 4.9   |              |
|              | 11-21      | .9   | 1.6  | .5   | .5   | .7  | .7  | .5  | .4  | .0  | .0   | 5.7   |              |
|              | 22+        | .3   | .3   | .1   | .2   | .3  | .4  | .2  | .2  | .0  | .0   | 2.1   |              |
|              | TOT %      | 2.0  | 3.2  | 1.4  | 1.4  | 1.5 | 1.8 | 1.1 | 1.0 | .0  | .5   | 13.7  |              |
| 10+          | 0-3        | .4   | .7   | .5   | .6   | .4  | .5  | .4  | .3  | .0  | 2.5  | 6.4   |              |
|              | 4-10       | 5.8  | 10.8 | 6.1  | 4.2  | 3.4 | 3.4 | 2.6 | 2.8 | .0  | .0   | 39.1  |              |
|              | 11-21      | 5.0  | 11.8 | 3.8  | 3.3  | 3.0 | 2.8 | 2.0 | 1.8 | .0  | .0   | 33.6  |              |
|              | 22+        | 1.2  | 1.5  | .3   | .4   | .4  | .6  | .6  | .4  | .0  | .0   | 5.3   |              |
|              | TOT %      | 12.4 | 24.9 | 10.8 | 8.5  | 7.2 | 7.4 | 5.6 | 5.3 | .0  | 2.5  | 84.4  |              |
| TOT OBS      |            |      |      |      |      |     |     |     |     |     |      |       |              |
| TOT PCT      |            | 14.5 | 28.3 | 12.3 | 10.1 | 9.0 | 9.5 | 6.8 | 6.5 | .0  | 3.1  | 100.0 | 7502         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HRUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .0         | .6         | 3.1        | 11.7         | 9.0          | 3.9          | .7           | .7           | .7    | 30.6  | 69.4               | 1091         |
| 06009         | .4         | .1         | .4         | 3.7        | 13.1         | 10.8         | 3.8          | 1.9          | .1           | 1.3   | 35.5  | 64.5               | 1101         |
| 12015         | .2         | .1         | .4         | 3.0        | 12.4         | 11.6         | 5.4          | 1.4          | .7           | 1.5   | 36.6  | 63.4               | 1289         |
| 18021         | .3         | .1         | .8         | 2.4        | 12.4         | 11.4         | 5.1          | .9           | 1.1          | 1.2   | 35.7  | 64.3               | 1157         |
| TOT           | 9          | 3          | 25         | 142        | 576          | 498          | 214          | 57           | 31           | 55    | 1010  | 3028               | 4638         |
| PCT           | .2         | .1         | .5         | 3.1        | 12.4         | 10.7         | 4.6          | 1.2          | .7           | 1.2   | 34.7  | 65.3               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HRUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .2    | .2  | 1.9 | 13.7 | 83.9 | 1699         |
| 06009         | .1   | .2    | *   | 1.6 | 15.7 | 82.2 | 2066         |
| 12015         | .0   | .1    | .1  | 1.2 | 10.9 | 87.7 | 1850         |
| 18021         | .1   | .3    | .3  | 1.2 | 14.2 | 83.9 | 2044         |
| TOT           | 6    | 16    | 14  | 112 | 1049 | 6462 | 7659         |
| PCT           | .1   | .2    | .2  | 1.5 | 13.7 | 84.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HRUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|----------------|-------------------|--------------|
| 00003         | .0            | 1.0        | 6.1         | 26.7           | 67.2              | 1042         |
| 06009         | .4            | 1.0        | 6.0         | 31.4           | 62.6              | 1057         |
| 12015         | .2            | .6         | 4.5         | 33.3           | 62.2              | 1260         |
| 18021         | .3            | 1.2        | 5.0         | 32.0           | 63.0              | 1131         |
| TOT           | 9             | 42         | 241         | 1391           | 2858              | 4490         |
| PCT           | .2            | .9         | 5.4         | 31.0           | 63.7              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | *     | .2    | .1    | .0    | .0     | 12           | .3          |
| 70/74  | *    | .0    | *     | .1    | .5    | .6    | .2    | .1     | 66           | 1.5         |
| 65/69  | .0   | .0    | *     | .8    | 4.4   | 9.3   | 8.6   | 3.1    | 1119         | 26.3        |
| 60/64  | .0   | .0    | .1    | 2.3   | 12.0  | 22.7  | 16.8  | 6.8    | 2586         | 60.7        |
| 55/59  | .0   | .0    | *     | .6    | 2.9   | 3.8   | 2.2   | 1.0    | 449          | 10.5        |
| 50/54  | .0   | .0    | .0    | *     | .2    | .1    | .1    | .1     | 25           | .6          |
| 45/49  | .0   | .0    | .0    | .0    | .0    | .0    | *     | .0     | 2            | *           |
| 40/44  | .0   | .0    | .0    | .0    | .0    | .0    | *     | .0     | 1            | *           |
| TOTAL  | 1    | 0     | 9     | 164   | 858   | 1562  | 1193  | 473    | 4260         | 100.0       |
| PCT    | *    | .0    | .2    | 3.8   | 20.1  | 36.7  | 28.0  | 11.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E    | SE   | S   | SW   | W   | NW  | VAR | CALM |
|-------|------|------|------|------|-----|------|-----|-----|-----|------|
| 75/79 | .0   | .0   | *    | .1   | *   | .1   | *   | *   | .0  | .0   |
| 70/74 | .1   | .3   | .1   | .2   | .2  | .2   | .2  | .2  | .0  | .1   |
| 65/69 | 1.4  | 3.1  | 2.8  | 5.2  | 4.9 | 4.7  | 2.2 | 1.4 | .0  | .6   |
| 60/64 | 10.1 | 20.3 | 7.4  | 5.2  | 4.4 | 4.8  | 3.4 | 3.6 | .0  | 1.5  |
| 55/59 | 2.9  | 4.0  | 1.0  | .4   | .4  | .4   | .5  | .7  | .0  | .3   |
| 50/54 | .3   | .2   | *    | *    | *   | *    | *   | .0  | .0  | .0   |
| 45/49 | .0   | *    | .0   | .0   | .0  | .0   | .0  | .0  | .0  | .0   |
| 40/44 | .0   | .0   | *    | .0   | .0  | .0   | .0  | .0  | .0  | .0   |
| TOTAL | 14.8 | 27.9 | 11.4 | 11.0 | 9.9 | 10.2 | 6.3 | 5.9 | .0  | 2.6  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HRUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 77  | 68  | 66  | 62  | 57 | 54 | 46  | 61.9 | 2140         |
| 06009         | 73  | 68  | 66  | 62  | 57 | 54 | 43  | 61.5 | 2951         |
| 12015         | 77  | 73  | 69  | 64  | 59 | 55 | 50  | 64.1 | 2257         |
| 18021         | 78  | 71  | 68  | 63  | 58 | 55 | 49  | 62.9 | 2871         |
| TOT           | 78  | 70  | 68  | 63  | 58 | 55 | 43  | 62.5 | 10219        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HRUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.9   | 15.7  | 37.4  | 31.4  | 12.6   | 78   | 1030         |
| 06009         | .0   | 2.9   | 16.4  | 35.5  | 31.6  | 13.6   | 78   | 1098         |
| 12015         | .0   | 6.7   | 25.2  | 36.4  | 22.7  | 9.1    | 75   | 1149         |
| 18021         | .1   | 3.6   | 22.3  | 37.5  | 27.0  | 9.5    | 76   | 1093         |
| TOT           | 1    | 178   | 875   | 1603  | 1226  | 487    | 77   | 4370         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | *        | .1       | *        | .1       | .1       | 18    | .0       | .4        |
| 9/10               | .0       | .0       | .0       | .0       | *        | .1       | *        | .2       | *        | 18    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .2       | .3       | .1       | .0       | 39    | .0       | .8        |
| 6                  | .0       | .0       | .0       | .0       | *        | .3       | .2       | .0       | .0       | 22    | .0       | .4        |
| 5                  | .0       | .0       | *        | .0       | .3       | .7       | .6       | *        | .0       | 82    | .0       | 1.7       |
| 4                  | .0       | .0       | .0       | .0       | .4       | 1.2      | .5       | .1       | .0       | 108   | *        | 2.2       |
| 3                  | .0       | .0       | *        | .1       | .5       | 2.2      | .3       | *        | .0       | 156   | .1       | 3.1       |
| 2                  | .0       | .0       | .0       | .1       | 1.9      | 3.9      | .3       | .0       | .0       | 307   | .1       | 6.2       |
| 1                  | .0       | .0       | .0       | .2       | 3.8      | 5.6      | .1       | .0       | .0       | 473   | .1       | 9.5       |
| 0                  | .0       | .0       | .0       | .5       | 9.1      | 5.6      | .1       | .0       | .0       | 757   | .1       | 15.2      |
| -1                 | .0       | .0       | .0       | 1.3      | 11.0     | 3.7      | *        | .0       | .0       | 794   | .1       | 16.0      |
| -2                 | .0       | *        | .0       | 3.1      | 10.7     | 1.5      | *        | .0       | .0       | 753   | .2       | 15.1      |
| -3                 | .0       | .0       | .1       | 4.0      | 5.9      | .6       | .0       | .0       | .0       | 527   | .1       | 10.6      |
| -4                 | .0       | *        | .1       | 3.4      | 3.4      | .2       | .0       | .0       | .0       | 349   | .1       | 7.0       |
| -5                 | .0       | .0       | .2       | 2.6      | 1.8      | .1       | .0       | .0       | .0       | 233   | .0       | 4.7       |
| -6                 | .0       | .0       | .2       | 1.3      | .6       | *        | .0       | .0       | .0       | 107   | .0       | 2.2       |
| -7/-8              | .0       | .0       | .6       | 1.4      | .5       | .1       | .0       | .0       | .0       | 123   | .0       | 2.5       |
| -9/-10             | .0       | .0       | .4       | .5       | *        | .0       | .0       | .0       | .0       | 45    | *        | .9        |
| -11/-13            | .0       | .1       | .1       | .1       | *        | .0       | .0       | .0       | .0       | 13    | .0       | .3        |
| -14/-16            | .0       | *        | .0       | *        | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| -17/-19            | .1       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| -20/-22            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 4        | 8        | 83       | 915      | 2478     | 1290     | 120      | 27       | 6        | 4931  | 42       | 4889      |
| PCT                | .1       | .2       | 1.7      | 18.6     | 50.3     | 26.2     | 2.4      | .5       | .1       | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE  |      |       |       |       |     |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     |
| <1      | .1  | 1.0  | *     | .0    | .0    | .0  | 1.1  | .4  | 1.0 | .3   | .0    | .0    | .0    | .0  | 1.7  | .4  |
| 1-2     | .2  | 3.3  | .7    | .0    | .0    | .0  | 4.2  | .2  | 5.7 | 2.4  | .0    | .0    | .0    | .0  | 8.3  | .2  |
| 3-4     | *   | 1.1  | 2.0   | .1    | .0    | .0  | 3.2  | *   | 2.6 | 5.7  | .1    | .0    | .0    | .0  | 8.5  | *   |
| 5-6     | .0  | .4   | 1.9   | .3    | .0    | .0  | 2.6  | .0  | .5  | 3.8  | .9    | .0    | .0    | .0  | 5.2  | .0  |
| 7       | .0  | *    | .8    | .5    | .0    | .0  | 1.3  | .0  | .1  | 1.1  | .3    | .0    | .0    | .0  | 1.5  | .0  |
| 8-9     | .0  | .0   | .3    | .2    | *     | .0  | .5   | .0  | .0  | .5   | .3    | *     | .0    | .0  | .9   | .0  |
| 10-11   | .0  | .0   | .1    | .2    | .0    | .0  | .3   | .0  | .0  | .1   | .3    | .0    | .0    | .0  | .3   | .0  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | *    | .0    | .0    | .0    | .0  | *    | .0  |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| TOT PCT | .3  | 5.9  | 5.7   | 1.3   | *     | .0  | 13.3 | .6  | 9.9 | 13.8 | 2.0   | *     | .0    | .0  | 26.3 | .6  |

| HGT     | E   |      |       |       |       |     |      | PCT | SE  |      |       |       |       |     |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     |
| <1      | .2  | 1.1  | .1    | .0    | .0    | .0  | 1.4  | .3  | .8  | .1   | .0    | .0    | .0    | .0  | 1.1  | .3  |
| 1-2     | .1  | 3.6  | 1.2   | .0    | .0    | .0  | 5.0  | .1  | 2.5 | .8   | .0    | .0    | .0    | .0  | 3.4  | .1  |
| 3-4     | .0  | 1.5  | 2.0   | .1    | .0    | .0  | 3.7  | .0  | 1.1 | 1.9  | *     | .0    | .0    | .0  | 3.1  | .0  |
| 5-6     | .0  | .4   | 1.0   | .1    | .0    | .0  | 1.5  | .0  | .3  | 1.8  | .4    | .0    | .0    | .0  | 2.5  | .0  |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | *   | .5   | .1    | .0    | .0    | .0  | .7   | .0  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .1   | .0  | .0  | .1   | .1    | .0    | .0    | .0  | .2   | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | *    | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .2   | .0  |
| 12      | .0  | .0   | .0    | .1    | *     | .0  | .1   | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | *    | .0    | .0    | .0    | .0  | *    | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| TOT PCT | .3  | 6.7  | 4.6   | .4    | *     | .0  | 12.0 | .4  | 4.8 | 5.2  | .8    | .2    | .0    | .0  | 11.3 | .4  |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)AREA 0003 CASABLANCA SW  
31.7N 13.1W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | 1.1  | .0    | .0    | .0    | .0  | 1.2  | .4  | .7   | .0    | .0    | .0    | .0  | 1.2  |
| 1-2     | .2  | 2.1  | .7    | .0    | .0    | .0  | 3.0  | .2  | 1.9  | .7    | .0    | .0    | .0  | 2.8  |
| 3-4     | .0  | .6   | 2.1   | .1    | .0    | .0  | 2.9  | .0  | .9   | 1.3   | .3    | .0    | .0  | 2.4  |
| 5-6     | .0  | .2   | 1.7   | .2    | .0    | .0  | 2.1  | .0  | .2   | 1.5   | .3    | .0    | .0  | 2.0  |
| 7       | .0  | .1   | .6    | .4    | .0    | .0  | 1.0  | .0  | .1   | .6    | .5    | .0    | .0  | 1.1  |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .3   | .0  | .0   | .1    | .2    | .0    | .0  | .3   |
| 10-11   | .0  | .0   | .1    | .3    | .0    | .0  | .4   | .0  | .0   | .0    | .3    | .0    | .0  | .3   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 4.0  | 5.5   | 1.2   | .0    | .0  | 11.1 | .6  | 3.9  | 4.3   | 1.6   | .0    | .0  | 10.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .6   | .1    | .0    | .0    | .0  | .7  | .2  | .6   | .0    | .0    | .0    | .0  | .7  |           |
| 1-2     | .0  | 1.2  | .7    | .0    | .0    | .0  | 1.9 | .1  | 1.9  | .5    | .0    | .0    | .0  | 2.5 |           |
| 3-4     | .0  | .5   | 1.0   | .2    | .0    | .0  | 1.7 | .0  | .6   | .9    | .0    | .0    | .0  | 1.5 |           |
| 5-6     | .0  | .1   | .7    | .1    | .0    | .0  | .9  | .0  | .1   | .4    | .0    | .0    | .0  | .4  |           |
| 7       | .0  | .0   | .4    | .2    | .0    | .0  | .6  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | 2.4  | 2.9   | .7    | .0    | .0  | 6.1 | .3  | 3.1  | 1.8   | .1    | .0    | .0  | 5.4 | 96.0      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.4 | 6.9  | .5    | .0    | .0    | .0  | 13.9  |         |
| 1-2     | 1.3 | 22.2 | 7.5   | .0    | .0    | .0  | 31.0  |         |
| 3-4     | .2  | 8.8  | 16.7  | .9    | .0    | .0  | 26.7  |         |
| 5-6     | .0  | 2.1  | 12.6  | 2.2   | .0    | .0  | 17.0  |         |
| 7       | .0  | .3   | 4.1   | 1.9   | .0    | .0  | 6.4   |         |
| 8-9     | .0  | .0   | 1.2   | 1.1   | .2    | .0  | 2.5   |         |
| 10-11   | .0  | .1   | .3    | 1.2   | .0    | .0  | 1.6   |         |
| 12      | .0  | .0   | .0    | .2    | .1    | .0  | .4    |         |
| 13-16   | .0  | .0   | .1    | .3    | .0    | .0  | .5    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.0 | 40.5 | 43.2  | 8.0   | .4    | .0  | 100.0 | 2824    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.7 | 6.6  | 7.8  | 5.5  | 2.0  | .7   | .4    | .3  | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 919   | 4        |
| 6-7          | .1  | .9   | 4.0  | 6.1  | 4.1  | 2.1  | 1.1   | .2  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 694   | 6        |
| 8-9          | .1  | .4   | 2.0  | 3.6  | 4.3  | 2.2  | 1.4   | .5  | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 555   | 7        |
| 10-11        | .0  | .7   | .6   | 1.5  | 1.7  | 1.9  | 1.2   | .6  | .5    | .0    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 325   | 8        |
| 12-13        | .0  | .0   | .9   | 1.3  | 1.3  | 1.0  | .6    | .4  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 217   | 7        |
| >13          | .0  | .0   | .0   | .6   | .4   | .4   | .5    | .2  | .5    | .2    | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 105   | 10       |
| INDET        | 3.5 | 3.9  | 5.0  | 3.5  | 3.1  | 1.9  | 1.6   | .3  | .3    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 853   | 4        |
| TOTAL        | 194 | 458  | 745  | 813  | 614  | 376  | 251   | 92  | 94    | 20    | 6     | 2     | 3     | 0     | 0     | 0     | 0     | 0     | 0   | 3668  | 5        |
| PCT          | 5.3 | 12.5 | 20.3 | 22.2 | 16.7 | 10.3 | 6.8   | 2.5 | 2.6   | .5    | .2    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

# FEBRUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .9   | 2.2       | 1.2  | .0        | .0   | .0             | .0   | 4.3             | 1.7            | 1.4                     | .3          | .0                  | .0         | .1                   | 92.6       |
| NE                 | .9   | 1.7       | .4   | .0        | .0   | .0             | .0   | 2.8             | 1.5            | .4                      | .3          | .0                  | .1         | .2                   | 94.6       |
| E                  | 1.4  | .5        | .6   | .0        | .0   | .0             | .0   | 2.6             | 1.1            | .4                      | 1.3         | .0                  | .0         | .0                   | 94.6       |
| SE                 | 3.5  | 1.5       | .0   | .0        | .0   | .0             | .0   | 5.0             | 2.8            | 3.0                     | .6          | .0                  | 1.9        | .0                   | 87.1       |
| S                  | 3.2  | 2.2       | 1.3  | .0        | .0   | .0             | .0   | 6.5             | 5.1            | 4.6                     | .6          | .0                  | .5         | .2                   | 83.1       |
| SW                 | 2.7  | 1.9       | 1.6  | .0        | .0   | .0             | .0   | 6.2             | 5.4            | 1.4                     | .2          | .0                  | .5         | .0                   | 86.4       |
| W                  | 2.5  | 1.8       | 1.2  | .0        | .0   | .0             | .1   | 5.6             | 3.8            | 2.0                     | .2          | .0                  | .9         | .0                   | 87.6       |
| NW                 | 1.0  | 3.6       | .8   | .0        | .0   | .0             | .1   | 5.6             | 3.1            | .5                      | .2          | .0                  | .2         | .0                   | 90.4       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | 1.7  | .9        | .0   | .0        | .0   | .0             | .0   | 2.6             | 1.7            | .0                      | .0          | .0                  | 3.4        | .0                   | 92.3       |
| TOT PCT            | 1.8  | 2.0       | 1.0  | .0        | .0   | .0             | *    | 4.8             | 3.1            | 1.5                     | .4          | .0                  | .5         | .1                   | 90.0       |
| TOT OBS:           | 5106 |           |      |           |      |                |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                                 |                  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|---------------------------------|------------------|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00603               | 2.3                | 1.5          | 1.1  | .0           | .0   | .0                    | .1   | 4.8                     | 2.6               | 3.2          | .3                | .0                        | .9            | .1                              | 88.2             |
| 06609               | 1.9                | 2.6          | 1.9  | .0           | .0   | .0                    | .0   | 6.5                     | 3.5               | 2.4          | .6                | .0                        | .3            | .1                              | 87.1             |
| 12615               | 2.2                | 1.8          | .6   | .0           | .0   | .0                    | .0   | 4.5                     | 3.1               | .4           | .1                | .0                        | .3            | .1                              | 91.6             |
| 18621               | 1.6                | 2.0          | .4   | .0           | .0   | .0                    | .0   | 3.9                     | 3.1               | .2           | .4                | .0                        | .3            | .1                              | 92.1             |
| TOT PCT<br>TOT OBS: | 2.0<br>5277        | 2.0          | 1.0  | .0           | .0   | .0                    | *    | 4.9                     | 3.1               | 1.5          | .4                | .0                        | .4            | .1                              | 89.8             |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21    |       |
| N        | .8                 | 7.8  | 7.3   | 1.6   | .1    | .0 |      | 17.6  | 12.2      |          | 18.3     | 19.0       | 16.6  | 18.9  | 16.1  | 12.5  | 17.9  | 20.6  |
| NE       | 1.0                | 9.3  | 12.2  | 2.8   | .1    | .0 |      | 25.3  | 13.1      |          | 24.9     | 12.3       | 23.0  | 30.1  | 23.4  | 14.9  | 23.1  | 30.2  |
| E        | .6                 | 4.6  | 3.4   | .5    | *     | .0 |      | 9.0   | 10.8      |          | 8.4      | 8.6        | 8.8   | 11.8  | 9.6   | 8.9   | 8.0   | 9.6   |
| SE       | .4                 | 2.2  | 1.2   | .3    | .0    | .0 |      | 4.1   | 9.9       |          | 4.4      | 3.9        | 4.3   | 3.2   | 3.8   | 5.8   | 4.3   | 3.9   |
| S        | .6                 | 2.6  | 2.9   | .6    | .1    | *  |      | 6.8   | 12.5      |          | 7.5      | 8.8        | 7.6   | 4.0   | 7.1   | 10.7  | 7.2   | 4.1   |
| SW       | .6                 | 4.8  | 5.5   | 1.9   | .2    | *  |      | 12.9  | 13.7      |          | 12.2     | 17.2       | 13.0  | 7.8   | 15.6  | 11.9  | 14.5  | 9.3   |
| W        | .5                 | 4.6  | 4.3   | 1.5   | .3    | *  |      | 11.2  | 13.4      |          | 11.1     | 12.9       | 11.6  | 10.3  | 10.2  | 23.8  | 12.1  | 9.5   |
| NW       | .5                 | 5.1  | 3.9   | 1.2   | .1    | *  |      | 10.9  | 12.2      |          | 10.7     | 12.1       | 10.4  | 12.3  | 10.3  | 7.5   | 11.3  | 11.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.1                |      |       |       |       |    |      | 2.1   | .0        |          | 2.5      | 5.2        | 2.6   | 1.5   | 1.8   | 4.0   | 1.6   | 1.6   |
| TOT OBS  | 676                | 3892 | 3845  | 976   | 96    | 2  | 9487 |       | 12.3      |          | 1856     | 116        | 1818  | 855   | 1996  | 124   | 1899  | 823   |
| TOT PCT  | 7.1                | 41.0 | 40.5  | 10.3  | 1.0   | *  |      | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |       | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |  |  |
|----------|------|--------------------|-------|-------|-------|------|-----------|----------|----------|------------|-------|-------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00 03 |      |           |          |          | 06 09      | 12 15 | 18 21 |  |  |
| N        | 3.6  | 9.7                | 3.8   | .5    | *     |      | 17.6      | 12.2     | 18.3     | 17.3       | 15.9  | 18.7  |  |  |
| NE       | 3.9  | 13.8               | 6.8   | .8    | *     |      | 25.3      | 13.1     | 24.2     | 26.7       | 24.8  | 23.3  |  |  |
| E        | 2.2  | 5.3                | 1.4   | .1    | .0    |      | 9.0       | 10.8     | 8.4      | 9.7        | 9.5   | 8.5   |  |  |
| SE       | 1.4  | 2.0                | .6    | *     | .0    |      | 4.1       | 9.9      | 4.3      | 4.0        | 3.9   | 4.1   |  |  |
| S        | 1.7  | 3.3                | 1.6   | .3    | *     |      | 6.8       | 12.5     | 7.6      | 6.5        | 7.3   | 6.3   |  |  |
| SW       | 2.2  | 6.5                | 3.6   | .7    | *     |      | 12.9      | 13.7     | 12.5     | 11.4       | 15.4  | 12.9  |  |  |
| W        | 2.2  | 5.7                | 2.5   | .8    | .1    |      | 11.2      | 13.4     | 11.2     | 11.2       | 11.0  | 11.3  |  |  |
| NW       | 2.4  | 5.9                | 2.1   | .5    | *     |      | 10.9      | 12.2     | 10.8     | 11.0       | 10.2  | 11.3  |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0    |      | .0        | .0       | .0       | .0         | .0    | .0    |  |  |
| CALM     | 2.1  |                    |       |       |       |      | 2.1       | .0       | 2.7      | 2.3        | 1.9   | 1.6   |  |  |
| TOT OBS  | 2063 | 4954               | 2110  | 348   | 12    | 9487 |           | 12.3     | 1972     | 2673       | 2120  | 2722  |  |  |
| TOT PCT  | 21.7 | 52.2               | 22.2  | 3.7   | .1    |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |  |  |

## FEBRUARY

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10  | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|------|-------|-------|-------|-------|-----|-------|----------|-----------|
| 00003 | 2.7  | 5.0  | 42.5  | 39.0  | 9.7   | 1.1   | .0  | 12.0  | 100.0    | 1972      |
| 06009 | 2.3  | 5.1  | 43.5  | 39.2  | 8.8   | 1.0   | *   | 11.9  | 100.0    | 2673      |
| 12015 | 1.9  | 5.1  | 36.9  | 43.6  | 11.6  | .9    | *   | 12.8  | 100.0    | 2120      |
| 18021 | 1.6  | 4.9  | 40.7  | 40.5  | 11.2  | 1.1   | .0  | 12.5  | 100.0    | 2722      |
| TOT   | 1.99 | 4.77 | 38.92 | 38.45 | 9.76  | .96   | 2   | 12.3  |          | 9487      |
| PCT   | 2.1  | 5.0  | 41.0  | 40.5  | 10.3  | 1.0   | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
| N        | 4.5  | 4.2  | 4.9  | 1.3           |              | 3.9                    |
| NE       | 5.6  | 4.0  | 6.5  | 1.7           |              | 4.0                    |
| E        | 2.7  | 1.5  | 2.4  | 1.0           |              | 3.9                    |
| SE       | 1.4  | .6   | 1.1  | .8            |              | 4.2                    |
| S        | 2.5  | 1.7  | 3.5  | 2.4           |              | 4.8                    |
| SW       | 4.4  | 3.6  | 6.7  | 4.2           |              | 4.9                    |
| W        | 3.5  | 3.9  | 4.4  | 2.2           |              | 4.3                    |
| NW       | 3.2  | 3.4  | 2.9  | .9            |              | 3.8                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | 1.0  | .4   | .8   | .3            |              | 3.8                    |
| TOT OBS  | 1180 | 958  | 1360 | 608           | 4106         | 4.3                    |
| TOT PCT  | 28.7 | 23.3 | 33.1 | 14.8          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT/NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | *          | .0         | *          | .6         | 1.1          | 1.5          | .8           | .3           | *            | *     | 10.4               |              |
| NE      | *          | *          | *          | .7         | 2.2          | 1.8          | 1.2          | .2           | *            | *     | 11.6               |              |
| E       | .0         | *          | *          | .1         | .8           | .6           | .3           | .2           | .1           | .1    | 5.4                |              |
| SE      | *          | .0         | *          | .2         | .5           | .3           | .1           | .1           | *            | *     | 2.6                |              |
| S       | *          | .0         | .1         | .8         | 1.7          | 1.0          | .3           | .1           | *            | .2    | 5.8                |              |
| SW      | .1         | *          | .3         | 1.4        | 2.3          | 1.9          | .7           | .3           | .3           | .4    | 11.1               |              |
| W       | .1         | .0         | *          | .7         | 1.6          | 1.1          | .5           | .1           | .1           | .2    | 9.4                |              |
| NW      | .0         | .0         | .1         | .3         | 1.0          | .8           | .3           | *            | *            | .1    | 7.9                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .0         | .2           | .3           | .1           | .0           | .1           | *     | 1.7                |              |
| TOT OBS | 10         | 3          | 26         | 199        | 466          | 388          | 180          | 52           | 29           | 49    | 2704               | 4106         |
| TOT PCT | .2         | .1         | .6         | 4.8        | 11.3         | 9.4          | 4.4          | 1.3          | .7           | 1.2   | 65.9               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            | VSBY (NM)  |            | VSBY (NM)    |              | VSBY (NM)     |            | VSBY (NM)  |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|------------|------------|
|                   | < OR<br>>10 | < OR<br>>5 | < OR<br>>2 | < OR<br>>1 | < OR<br>>1/2 | < OR<br>>1/4 | < OR<br>>50YD | < OR<br>>0 | < OR<br>>0 | < OR<br>>0 |
| < OR >6500        | 1.3         | 1.7        | 1.8        | 1.8        | 1.8          | 1.8          | 1.8           | 1.8        | 1.8        | 1.8        |
| < OR >5000        | 2.5         | 3.0        | 3.1        | 3.1        | 3.1          | 3.1          | 3.1           | 3.1        | 3.1        | 3.1        |
| < OR >3500        | 6.0         | 7.2        | 7.3        | 7.4        | 7.4          | 7.4          | 7.4           | 7.4        | 7.4        | 7.4        |
| < OR >2000        | 13.3        | 16.3       | 16.8       | 16.8       | 16.9         | 16.9         | 16.9          | 16.9       | 16.9       | 16.9       |
| < OR >1000        | 21.8        | 27.0       | 28.0       | 28.1       | 28.1         | 28.1         | 28.1          | 28.1       | 28.1       | 28.1       |
| < OR >600         | 24.8        | 31.6       | 32.8       | 33.0       | 33.0         | 33.0         | 33.0          | 33.0       | 33.0       | 33.0       |
| < OR >300         | 25.1        | 32.1       | 33.4       | 33.6       | 33.6         | 33.6         | 33.6          | 33.6       | 33.6       | 33.6       |
| < OR >150         | 25.1        | 32.2       | 33.5       | 33.7       | 33.7         | 33.7         | 33.7          | 33.7       | 33.7       | 33.7       |
| < OR >0           | 25.2        | 32.3       | 33.7       | 33.9       | 34.0         | 34.0         | 34.0          | 34.0       | 34.0       | 34.0       |
| TOTAL             | 1056        | 1355       | 1416       | 1424       | 1427         | 1427         | 1427          | 1427       | 1427       | 1427       |

TOTAL NUMBER OF OBS: 4198

PCT FREQ NH &lt;5/8: 66.0

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS CD | TOTAL<br>OBS |
|------|------|------|------|------|-----|-----|-----|------|--------|--------------|
| 13.2 | 11.6 | 15.7 | 14.0 | 10.9 | 7.0 | 8.0 | 8.2 | 11.3 | .2     | 4526         |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | * .0 | .0   | .0  | .0  | .0  | .0   | .0   | * .0 | .0  | .0   | *     |              |
|              | TOT %  | * .0 | .0   | .0  | .0  | .0  | .0   | .0   | * .0 | .0  | .0   | *     |              |
| 1/2<1        | PCP    | .0   | *    | *   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | NO PCP | .0   | *    | *   | *   | *   | .0   | *    | *    | .0  | .0   | .2    |              |
|              | TOT %  | .0   | *    | .1  | *   | *   | .0   | *    | *    | .0  | .0   | .2    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | *   | *    | *    | *    | .0  | *    | .1    |              |
|              | NO PCP | .0   | *    | *   | *   | *   | .0   | *    | *    | .0  | .0   | .1    |              |
|              | TOT %  | .0   | *    | *   | *   | .1  | *    | *    | *    | .0  | .0   | .2    |              |
| 2<5          | PCP    | *    | *    | *   | .1  | .2  | .1   | .1   | .0   | .0  | *    | .6    |              |
|              | NO PCP | .1   | .1   | .1  | .1  | .1  | .4   | .2   | *    | .0  | *    | 1.2   |              |
|              | TOT %  | .1   | .2   | .1  | .1  | .3  | .5   | .3   | *    | .0  | *    | 1.8   |              |
| 5<10         | PCP    | .2   | .3   | .1  | .1  | .3  | .6   | .3   | .4   | .0  | .0   | 2.3   |              |
|              | NO PCP | 2.2  | 2.8  | 1.3 | .9  | 2.0 | 2.8  | 2.1  | 1.5  | .0  | .4   | 16.0  |              |
|              | TOT %  | 2.4  | 3.0  | 1.4 | 1.0 | 2.3 | 3.5  | 2.4  | 1.9  | .0  | .4   | 18.3  |              |
| 10+          | PCP    | .4   | .2   | *   | .1  | .1  | .4   | .3   | .2   | .0  | *    | 1.8   |              |
|              | NO PCP | 12.3 | 15.2 | 6.0 | 2.8 | 6.9 | 13.3 | 10.7 | 8.7  | .0  | 1.9  | 77.7  |              |
|              | TOT %  | 12.7 | 15.4 | 6.1 | 2.9 | 7.0 | 13.7 | 11.0 | 9.0  | .0  | 1.9  | 79.5  |              |
| TOT OBS      |        |      |      |     |     |     |      |      |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |      |      |      |     |      |       |              |
|              |        | 15.2 | 18.6 | 7.6 | 4.0 | 9.7 | 17.7 | 13.8 | 11.0 | .0  | 2.3  | 100.0 | 5094         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | *    | .0  | *   | .0  | *    | .0   | *    | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .0  | *   | .0  | *    | .0   | *    | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | *   | .0  | .0   | *    | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | *    | *   | .0  | *   | .0   | *    | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | *    | *    | .0   | .0  | .0   | *     |              |
|              | TOT %      | .0   | *    | *   | *   | *   | .0   | *    | *    | .0  | .0   | .1    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | *   | *   | .0   | .0   | .0   | .0  | *    | *     |              |
|              | 4-10       | *    | *    | .0  | *   | .0  | *    | *    | .0   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | *    | *   | .0  | *   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | *   | *   | .0   | .0   | *    | .0  | .0   | *     |              |
|              | TOT %      | *    | *    | *   | *   | .1  | *    | *    | *    | .0  | *    | .2    |              |
| 2<5          | 0-3        | *    | *    | .0  | .0  | .0  | *    | .0   | *    | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | *   | .1  | .1  | .1   | .1   | *    | .0  | .0   | .4    |              |
|              | 11-21      | .1   | .1   | *   | *   | .1  | .2   | .2   | *    | .0  | .0   | .8    |              |
|              | 22+        | .1   | .1   | *   | *   | .1  | .2   | *    | *    | .0  | .0   | .5    |              |
|              | TOT %      | .2   | .2   | .1  | .2  | .3  | .5   | .3   | .1   | .0  | *    | 1.8   |              |
| 5<10         | 0-3        | .1   | .1   | .1  | .1  | .1  | .1   | *    | *    | .0  | .3   | .9    |              |
|              | 4-10       | .8   | 1.2  | .8  | .5  | .5  | .8   | .8   | .5   | .0  | .0   | 5.9   |              |
|              | 11-21      | 1.0  | 1.4  | .5  | .4  | .9  | 1.4  | .8   | .6   | .0  | .0   | 7.0   |              |
|              | 22+        | .4   | .5   | .1  | .1  | .3  | .6   | .4   | .4   | .0  | .0   | 2.9   |              |
|              | TOT %      | 2.4  | 3.2  | 1.5 | 1.0 | 1.8 | 2.9  | 2.0  | 1.6  | .0  | .3   | 16.7  |              |
| 10+          | 0-3        | .6   | .8   | .4  | .3  | .4  | .5   | .5   | .5   | .0  | 1.9  | 5.8   |              |
|              | 4-10       | 6.4  | 7.1  | 3.6 | 1.7 | 2.5 | 4.3  | 4.0  | 4.3  | .0  | .0   | 33.9  |              |
|              | 11-21      | 6.5  | 9.8  | 2.6 | .9  | 2.5 | 4.7  | 3.6  | 3.3  | .0  | .0   | 34.0  |              |
|              | 22+        | 1.1  | 1.9  | .3  | .2  | .5  | 1.4  | 1.2  | .8   | .0  | .0   | 7.4   |              |
|              | TOT %      | 14.6 | 19.6 | 7.0 | 3.1 | 5.8 | 10.9 | 9.3  | 8.8  | .0  | 1.9  | 81.0  |              |
| TOT OBS      |            |      |      |     |     |     |      |      |      |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |      |      |      |     |      |       |              |
|              |            | 17.3 | 23.1 | 8.6 | 4.3 | 7.9 | 14.3 | 11.6 | 10.6 | .0  | 2.2  | 100.0 | 7166         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

# FEBRUARY

AREA 0003 C-SABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .6         | .0         | .5         | 4.1        | 8.6          | 6.9          | 3.7          | 1.1          | .6           | 1.1   | 27.2  | 72.8               | 1016         |
| 06009         | .3         | .0         | .8         | 4.8        | 11.4         | 11.8         | 4.3          | 1.5          | .7           | 1.6   | 37.1  | 62.9               | 1022         |
| 12015         | .1         | .2         | .6         | 4.6        | 11.6         | 8.4          | 4.5          | 1.4          | .8           | 1.2   | 33.3  | 66.7               | 1203         |
| 18021         | .2         | .1         | .5         | 5.3        | 11.7         | 9.6          | 4.1          | 1.0          | .5           | .6    | 33.5  | 66.5               | 1157         |
| TOT           | 12         | 3          | 26         | 207        | 477          | 403          | 183          | 85           | 29           | 49    | 1444  | 2954               | 4398         |
| PCT           | .3         | .1         | .6         | 4.7        | 10.8         | 9.2          | 4.2          | 1.3          | .7           | 1.1   | 32.8  | 67.2               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .3    | .2  | 2.7 | 17.4 | 79.2 | 1617         |
| 06009         | .2   | .2    | .3  | 1.9 | 18.7 | 78.8 | 1944         |
| 12015         | .0   | .0    | .2  | 1.3 | 14.0 | 84.5 | 1762         |
| 18021         | .0   | .1    | .1  | 1.8 | 17.1 | 80.9 | 2016         |
| TOT           | 6    | 11    | 15  | 139 | 1236 | 5932 | 7339         |
| PCT           | .1   | .1    | .2  | 1.9 | 16.8 | 80.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .6           | 1.3        | 7.5         | 21.5            | 71.0              | 954          |
| 06009         | .3           | 1.0        | 7.7         | 31.3            | 60.9              | 957          |
| 12015         | .1           | .9         | 6.7         | 27.9            | 65.3              | 1163         |
| 18021         | .2           | .9         | 7.7         | 27.1            | 65.2              | 1124         |
| TOT           | 12           | 42         | 310         | 1135            | 2753              | 4198         |
| PCT           | .3           | 1.0        | 7.4         | 27.0            | 65.6              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| 70/74  | .0   | .0    | *     | .1    | .3    | .5    | .4    | .1     | 60           | 1.5         |
| 65/69  | .0   | .0    | .0    | 1.0   | 2.1   | 5.2   | 8.2   | 4.5    | 856          | 21.1        |
| 60/64  | .0   | .0    | .2    | 3.4   | 14.1  | 19.0  | 18.3  | 8.4    | 2575         | 63.4        |
| 55/59  | .0   | .0    | .1    | .8    | 3.3   | 4.2   | 3.0   | 1.9    | 538          | 13.3        |
| 50/54  | .0   | .0    | .0    | .0    | *     | .1    | .2    | .3     | 26           | .6          |
| 45/49  | .0   | .0    | .0    | .0    | .0    | *     | *     | *      | 4            | .1          |
| TOTAL  | 0    | 0     | 13    | 215   | 810   | 1180  | 1223  | 619    | 4060         | 100.0       |
| PCT    | .0   | .0    | .3    | 5.3   | 20.0  | 29.1  | 30.1  | 15.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM |
|-------|------|------|-----|-----|-----|------|------|------|-----|------|
| 75/79 | .0   | .0   | .0  | .0  | *   | *    | .0   | .0   | .0  | .0   |
| 70/74 | .2   | .2   | .0  | *   | .2  | .5   | .2   | .1   | .0  | *    |
| 65/69 | 1.5  | 1.7  | 1.5 | 1.2 | 3.5 | 6.9  | 3.2  | 1.2  | .0  | .3   |
| 60/64 | 10.7 | 12.5 | 5.0 | 2.3 | 5.4 | 9.2  | 9.8  | 7.2  | .0  | 1.2  |
| 55/59 | 3.4  | 3.5  | 1.3 | .3  | .5  | .6   | 1.0  | 2.2  | .0  | .4   |
| 50/54 | .2   | .1   | *   | .1  | *   | .1   | .0   | .1   | .0  | .0   |
| 45/49 | .0   | .0   | .0  | *   | .0  | *    | *    | .0   | .0  | .0   |
| TOTAL | 16.1 | 18.1 | 7.8 | 4.0 | 9.7 | 17.4 | 14.2 | 10.8 | .0  | 2.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 76  | 67  | 65  | 61  | 56 | 54 | 43  | 61.2 | 2007         |
| 06009         | 72  | 67  | 65  | 61  | 56 | 52 | 46  | 60.9 | 2716         |
| 12015         | 78  | 72  | 69  | 64  | 59 | 54 | 46  | 63.7 | 2097         |
| 18021         | 77  | 71  | 68  | 63  | 58 | 55 | 47  | 62.6 | 2686         |
| TOT           | 78  | 70  | 67  | 62  | 57 | 54 | 43  | 62.0 | 9506         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 3.7   | 17.3  | 28.8  | 34.0  | 16.2   | 79   | 1010         |
| 06009         | .0   | 3.7   | 17.5  | 27.8  | 33.2  | 17.8   | 79   | 1039         |
| 12015         | .0   | 9.6   | 23.9  | 26.9  | 26.8  | 12.7   | 75   | 1078         |
| 18021         | .0   | 5.8   | 21.1  | 31.9  | 27.2  | 14.0   | 77   | 1074         |
| TOT           | 0    | 24.1  | 84.2  | 121.3 | 126.9 | 63.6   | 77   | 4201         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>44 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .0       | .2       | *        | 12    | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .1       | .2       | .1       | *        | 23    | .0       | .5        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .2       | .3       | .1       | .0       | 36    | .0       | .8        |
| 6                  | .0       | .0       | .0       | .1       | .1       | .2       | .2       | .0       | .0       | 25    | .0       | .5        |
| 5                  | .0       | .0       | .0       | .1       | .3       | .8       | .4       | *        | .0       | 75    | .0       | 1.6       |
| 4                  | .0       | .0       | .0       | .1       | .6       | 1.6      | .3       | *        | .0       | 120   | .0       | 2.6       |
| 3                  | .0       | .0       | .0       | *        | .9       | 1.8      | .3       | .0       | .0       | 140   | *        | 3.0       |
| 2                  | .0       | .0       | *        | .1       | 2.7      | 3.4      | .2       | .0       | .0       | 300   | *        | 6.4       |
| 1                  | .0       | .0       | .0       | .4       | 5.6      | 5.5      | *        | .0       | .0       | 542   | *        | 11.5      |
| 0                  | .0       | .0       | *        | .9       | 11.0     | 3.9      | .1       | .0       | .0       | 746   | .1       | 15.8      |
| -1                 | .0       | .0       | .1       | 2.2      | 11.9     | 1.9      | .0       | .0       | .0       | 755   | .1       | 16.0      |
| -2                 | .0       | *        | .1       | 3.6      | 9.5      | .8       | *        | .0       | .0       | 659   | .0       | 14.0      |
| -3                 | .0       | .0       | .1       | 5.1      | 5.0      | .4       | .0       | .0       | .0       | 494   | *        | 10.5      |
| -4                 | .0       | .0       | .3       | 4.0      | 3.1      | .1       | .0       | .0       | .0       | 357   | *        | 7.6       |
| -5                 | .0       | .0       | .2       | 2.6      | 1.3      | .1       | .0       | .0       | .0       | 199   | .0       | 4.2       |
| -6                 | .0       | .0       | .4       | 1.0      | .3       | *        | .0       | .0       | .0       | 83    | .0       | 1.8       |
| -7/-8              | *        | .0       | .5       | .8       | .4       | *        | .0       | .0       | .0       | 80    | .0       | 1.7       |
| -9/-10             | .0       | .1       | .1       | .1       | .1       | .0       | .0       | .0       | .0       | 22    | .0       | .5        |
| -11/-13            | *        | .1       | .2       | *        | *        | .0       | .0       | .0       | .0       | 20    | .0       | .4        |
| -14/-16            | .1       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 6     | .0       | .1        |
| -17/-19            | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| -20/-22            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 8        | 93       | 1000     | 2492     | 970      | 94       | 22       | .3       | 4699     | 16    | 4683     |           |
| PCT                | .2       | .4       | 2.0      | 21.3     | 53.0     | 20.6     | 2.0      | .5       | .1       | 100.0 | .3       | 99.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | 1.2  | *     | .0    | .0    | .0  | 1.5  | .5  | 1.0  | .0    | .0    | .0    | .0  | 1.5  |
| 1-2     | .1  | 3.0  | 1.1   | .0    | .0    | .0  | 4.2  | .3  | 3.0  | 1.3   | .0    | .0    | .0  | 4.7  |
| 3-4     | .1  | 1.4  | 1.8   | .1    | .0    | .0  | 3.4  | *   | 1.7  | 2.5   | .1    | .0    | .0  | 4.4  |
| 5-6     | .0  | .4   | 2.2   | .3    | .0    | .0  | 2.9  | .0  | .3   | 2.3   | .5    | .0    | .0  | 3.1  |
| 7       | .0  | .1   | .5    | .3    | .0    | .0  | .9   | .0  | *    | .5    | .6    | .0    | .0  | 1.1  |
| 8-9     | .0  | .0   | .3    | .2    | .0    | .0  | .5   | .0  | .0   | .4    | .2    | .0    | .0  | .6   |
| 10-11   | .0  | .0   | .2    | .1    | .0    | .0  | .3   | .0  | .0   | .2    | .4    | *     | .0  | .7   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 13-16   | .0  | .0   | .0    | .0    | *     | .0  | *    | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 6.1  | 6.1   | 1.2   | .1    | .0  | 14.1 | .9  | 6.0  | 7.4   | 2.0   | *     | .0  | 16.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .6   | .1    | .0    | .0    | .0  | 1.0 | .1  | .5   | .0    | .0    | .0    | .0  | .6  |
| 1-2     | .2  | 2.6  | .9    | .0    | .0    | .0  | 3.6 | .1  | 1.2  | .2    | .0    | .0    | .0  | 1.5 |
| 3-4     | .0  | 1.1  | 1.0   | .1    | .0    | .0  | 2.2 | *   | .4   | .4    | .0    | .0    | .0  | .8  |
| 5-6     | .0  | .2   | .4    | .1    | *     | .0  | .8  | *   | .3   | .1    | .0    | .0    | .0  | .5  |
| 7       | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 4.5  | 2.6   | .2    | .1    | .0  | 8.0 | .3  | 2.4  | .9    | .0    | .0    | .0  | 3.5 |



PERIOD: (OVER-ALL) 1963-1973

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31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT  | SW  |      |       |       |       |     |  | PCT  |
|---------|-----|------|-------|-------|-------|-----|--|------|-----|------|-------|-------|-------|-----|--|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |
| <1      | .4  | .5   | .2    | .0    | .0    | .0  |  | 1.1  | .3  | .9   | .1    | .0    | .0    | .0  |  | 1.4  |
| 1-2     | .2  | 2.3  | .8    | .0    | .0    | .0  |  | 3.3  | .2  | 3.1  | 1.2   | .0    | .0    | .0  |  | 4.6  |
| 3-4     | .*  | .9   | 1.7   | .1    | .0    | .0  |  | 2.7  | .1  | 2.0  | 2.9   | .4    | .0    | .0  |  | 5.3  |
| 5-6     | .0  | .1   | 1.0   | .2    | .*    | .0  |  | 1.4  | .0  | .4   | 2.7   | .6    | .*    | .0  |  | 3.7  |
| 7       | .0  | .0   | .7    | .4    | .*    | .0  |  | 1.1  | .0  | .*   | 1.6   | .6    | .1    | .0  |  | 2.3  |
| 8-9     | .0  | .1   | .3    | .2    | .*    | .0  |  | .6   | .0  | .*   | .5    | .5    | .*    | .0  |  | 1.0  |
| 10-11   | .0  | .0   | .1    | .1    | .*    | .0  |  | .2   | .0  | .0   | .2    | .4    | .0    | .0  |  | .7   |
| 12      | .0  | .0   | .0    | .1    | .1    | .0  |  | .2   | .0  | .0   | .*    | .2    | .*    | .0  |  | .2   |
| 13-16   | .0  | .0   | .0    | .*    | .*    | .0  |  | .1   | .0  | .0   | .0    | .1    | .*    | .0  |  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .*    | .0    | .0  |  | .*   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| TOT PCT | .6  | 3.9  | 4.8   | 1.1   | .3    | .0  |  | 10.7 | .6  | 6.4  | 9.3   | 2.8   | .2    | .0  |  | 19.4 |

| HGT     | W   |      |       |       |       |     |  | PCT  | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|------|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .4  | .5   | .0    | .0    | .0    | .0  |  | .9   | .4  | .4   | .*    | .0    | .0    | .0  |  | .8  |           |
| 1-2     | .3  | 2.8  | 1.3   | .0    | .0    | .0  |  | 4.3  | .1  | 2.2  | .5    | .0    | .0    | .0  |  | 2.8 |           |
| 3-4     | .1  | 1.5  | 2.1   | .3    | .0    | .0  |  | 4.0  | .1  | 1.2  | 1.6   | .*    | .0    | .0  |  | 2.9 |           |
| 5-6     | .0  | .3   | 1.6   | .4    | .0    | .0  |  | 2.3  | .0  | .3   | 1.2   | .2    | .0    | .0  |  | 1.7 |           |
| 7       | .0  | .1   | .9    | .6    | .1    | .0  |  | 1.7  | .0  | .0   | .5    | .5    | .0    | .0  |  | 1.0 |           |
| 8-9     | .0  | .0   | .2    | .4    | .1    | .0  |  | .8   | .0  | .*   | .1    | .2    | .0    | .0  |  | .3  |           |
| 10-11   | .0  | .0   | .1    | .2    | .0    | .0  |  | .3   | .0  | .0   | .*    | .1    | .0    | .0  |  | .1  |           |
| 12      | .0  | .0   | .0    | .1    | .1    | .0  |  | .2   | .0  | .0   | .*    | .0    | .0    | .0  |  | .*  |           |
| 13-16   | .0  | .0   | .1    | .*    | .1    | .0  |  | .2   | .0  | .0   | .0    | .1    | .*    | .0  |  | .1  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .*    | .0  |  | .*  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .8  | 5.2  | 6.4   | 2.1   | .3    | .0  |  | 14.7 | .6  | 4.1  | 4.1   | 1.0   | .*    | .0  |  | 9.8 | 96.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.2 | 5.6  | .4    | .0    | .0    | .0  | 13.2  |         |
| 1-2     | 1.7 | 20.0 | 7.3   | .0    | .0    | .0  | 29.0  |         |
| 3-4     | .4  | 10.1 | 13.9  | 1.1   | .0    | .0  | 25.5  |         |
| 5-6     | .*  | 2.4  | 11.4  | 2.3   | .1    | .0  | 16.2  |         |
| 7       | .0  | .4   | 4.7   | 2.9   | .2    | .0  | 8.2   |         |
| 8-9     | .0  | .1   | 1.9   | 1.6   | .2    | .0  | 3.8   |         |
| 10-11   | .0  | .0   | .8    | 1.4   | .1    | .0  | 2.3   |         |
| 12      | .0  | .0   | .2    | .5    | .2    | .0  | .9    |         |
| 13-16   | .0  | .0   | .2    | .4    | .2    | .0  | .7    |         |
| 17-19   | .0  | .0   | .0    | .*    | .1    | .0  | .1    |         |
| 20-22   | .0  | .0   | .*    | .0    | .0    | .0  | .*    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 9.3 | 38.5 | 40.8  | 10.3  | 1.1   | .0  | 100.0 | 2550    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.4 | 6.3  | 8.3  | 4.6  | 2.2  | .9  | .7    | .4  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 818   | 4        |
| 6-7          | .0  | 1.3  | 3.9  | 5.5  | 4.6  | 1.9 | 1.7   | .6  | .4    | .0    | .*    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 658   | 6        |
| 8-9          | .0  | .3   | 1.5  | 3.0  | 3.4  | 2.2 | 1.6   | 1.0 | .9    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 460   | 7        |
| 10-11        | .0  | .5   | .9   | 1.5  | 1.6  | 1.0 | 1.3   | .5  | .6    | .2    | .*    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 276   | 8        |
| 12-13        | .0  | .0   | .9   | .7   | .9   | .6  | .8    | .7  | .5    | .1    | .1    | .0    | .0    | .*    | .0    | .0    | .0    | .0    | .0  | 174   | 8        |
| >13          | .0  | .0   | .0   | .3   | .5   | .5  | .5    | .3  | .4    | .2    | .*    | .0    | .*    | .0    | .0    | .0    | .0    | .0    | .0  | 89    | 10       |
| INDET        | 4.0 | 3.1  | 3.6  | 4.4  | 3.6  | 2.4 | 1.6   | .9  | .8    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 813   | 5        |
| TOTAL        | 177 | 380  | 626  | 660  | 553  | 311 | 272   | 144 | 125   | 28    | 7     | 0     | 4     | 1     | 0     | 0     | 0     | 0     | 0   | 3238  | 6        |
| PCT          | 5.4 | 11.6 | 19.0 | 20.1 | 16.8 | 9.5 | 8.3   | 4.4 | 3.8   | .9    | .2    | .0    | .1    | .*    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1925-1973  
(OVER-ALL) 1862-1973

MARCH

AREA 0003 CASABLANCA SW  
31.8N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | 1.0  | 1.3       | .3   | .0        | .0   | .0              | .0   | 2.6             | 2.5            | .3                      | .5          | .0                  | .4         | .0              | 93.8       |  |
| NE                 | .5   | 1.0       | .2   | .0        | .0   | .0              | .0   | 1.7             | .7             | .5                      | .7          | .0                  | .6         | .1              | 95.8       |  |
| E                  | .3   | .9        | .0   | .0        | .0   | .0              | .0   | 1.3             | 1.8            | 1.2                     | 1.4         | .0                  | 1.5        | .0              | 92.9       |  |
| SE                 | 4.2  | .4        | .7   | .0        | .0   | .0              | .7   | 6.1             | 2.2            | 3.1                     | 2.4         | .0                  | 1.3        | .0              | 84.9       |  |
| S                  | 3.3  | 3.0       | .6   | .0        | .0   | .0              | .0   | 8.9             | 4.0            | 3.6                     | 1.6         | .0                  | .3         | .0              | 81.7       |  |
| SW                 | 2.8  | 2.0       | .7   | .0        | .0   | .0              | .0   | 5.5             | 4.7            | 2.0                     | .3          | .0                  | .3         | .0              | 87.6       |  |
| W                  | 1.4  | 2.5       | .3   | .0        | .0   | .0              | .0   | 4.2             | 4.1            | 1.1                     | .1          | .0                  | .7         | .0              | 90.1       |  |
| NW                 | 1.0  | 2.6       | .2   | .0        | .0   | .0              | .0   | 3.8             | 3.5            | 1.6                     | .1          | .0                  | .3         | .0              | 90.7       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | 1.4       | .0   | .0        | .0   | .0              | .7   | 2.0             | .7             | 2.0                     | 3.4         | .0                  | 1.4        | .0              | 90.5       |  |
| TOT PCT            | 1.3  | 1.6       | .3   | .0        | .0   | .0              | *    | 3.3             | 2.5            | 1.1                     | .7          | .0                  | .5         | *               | 91.9       |  |
| TOT OBS:           | 5719 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |               |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                       |                  |
|---------------|--------------------|--------------|------|--------------|------|---------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-----------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST | NO<br>SIG<br>WEA |
| 00003         | 1.7                | 2.2          | .3   | .0           | .0   | .0            | .0   | 4.2                     | 2.6               | 2.5          | .5                | .0                        | .8            | .0                    | 89.5             |
| 06009         | 1.8                | 2.0          | .5   | .0           | .0   | .0            | .1   | 4.3                     | 2.2               | 1.6          | .7                | .0                        | .2            | .1                    | 90.9             |
| 12015         | .9                 | 1.2          | .3   | .0           | .0   | .0            | .0   | 2.4                     | 2.7               | .0           | .6                | .0                        | .7            | .0                    | 93.6             |
| 18021         | 1.0                | 1.1          | .2   | .0           | .0   | .0            | .1   | 2.4                     | 2.3               | .6           | .7                | .0                        | .7            | .0                    | 93.4             |
| TOT PCT       | 1.3                | 1.6          | .3   | .0           | .0   | .0            | *    | 3.3                     | 2.5               | 1.1          | .6                | .0                        | .6            | *                     | 92.0             |
| TOT OBS:      | 5939               |              |      |              |      |               |      |                         |                   |              |                   |                           |               |                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 9.4  | 10.3  | 2.9   | .2    | .0  |       | 24.0      | 13.0     |          | 23.5       | 24.8  | 23.6  | 22.8  | 23.5  | 22.9  | 26.1  | 23.1  |
| NE       | 1.0                | 9.6  | 12.8  | 3.2   | .2    | .0  |       | 26.8      | 13.5     |          | 27.7       | 29.4  | 27.5  | 27.5  | 27.3  | 26.1  | 24.6  | 25.4  |
| E        | .7                 | 2.6  | 2.1   | .3    | .0    | .0  |       | 5.7       | 10.4     |          | 5.2        | 3.6   | 5.3   | 7.3   | 6.3   | 5.4   | 5.0   | 6.2   |
| SE       | .3                 | 1.6  | .8    | .1    | *     | .0  |       | 2.8       | 9.4      |          | 2.4        | 3.4   | 2.6   | 3.6   | 3.0   | 2.1   | 2.3   | 3.6   |
| S        | .5                 | 2.1  | 1.4   | .3    | *     | *   |       | 4.3       | 10.5     |          | 4.6        | 6.0   | 3.6   | 4.4   | 4.5   | 2.9   | 4.2   | 4.6   |
| SW       | .5                 | 4.3  | 4.2   | 1.0   | .1    | *   |       | 10.1      | 12.6     |          | 10.0       | 7.6   | 10.6  | 9.4   | 10.9  | 11.3  | 10.2  | 8.2   |
| W        | .6                 | 5.5  | 4.0   | 1.2   | .2    | *   |       | 11.4      | 12.3     |          | 11.4       | 8.2   | 11.1  | 10.5  | 11.1  | 12.0  | 12.1  | 12.6  |
| NW       | .6                 | 5.7  | 4.4   | 1.6   | .3    | *   |       | 12.6      | 12.9     |          | 12.2       | 14.6  | 12.6  | 12.8  | 11.6  | 15.4  | 12.9  | 14.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.4                |      |       |       |       |     |       | 2.4       | .0       |          | 2.8        | 2.4   | 3.0   | 1.7   | 1.9   | 2.1   | 2.4   | 2.0   |
| TOT OBS  | 824                | 4283 | 4205  | 1115  | 100   | 4   | 10531 |           | 12.3     |          | 2044       | 125   | 2056  | 944   | 2201  | 140   | 2093  | 928   |
| TOT PCT  | 7.8                | 40.7 | 39.9  | 10.6  | .9    | *   |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 4.7                | 12.2 | 5.9   | 1.1   | *   |           | 24.0     | 13.0     | 23.6       | 23.4  | 23.5  | 25.2  |    |
| NE       | 4.2                | 13.8 | 7.7   | 1.0   | *   |           | 26.8     | 13.5     | 27.8       | 27.5  | 27.2  | 24.9  |    |
| E        | 1.8                | 2.8  | 1.0   | .1    | .0  |           | 5.7      | 10.4     | 5.2        | 5.9   | 6.2   | 5.4   |    |
| SE       | 1.0                | 1.5  | .3    | *     | .0  |           | 2.8      | 9.4      | 2.5        | 2.9   | 3.0   | 2.7   |    |
| S        | 1.5                | 2.0  | .7    | .1    | *   |           | 4.3      | 10.5     | 4.7        | 3.9   | 4.4   | 4.3   |    |
| SW       | 2.1                | 5.2  | 2.5   | .3    | *   |           | 10.1     | 12.6     | 9.9        | 10.2  | 10.9  | 9.6   |    |
| W        | 2.7                | 5.8  | 2.3   | .6    | *   |           | 11.4     | 12.3     | 11.3       | 10.9  | 11.1  | 12.3  |    |
| NW       | 3.0                | 6.1  | 2.7   | .8    | *   |           | 12.6     | 12.9     | 12.4       | 12.7  | 11.8  | 13.3  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.4                |      |       |       |     |           | 2.4      | .0       | 2.8        | 2.6   | 1.9   | 2.3   |    |
| TOT OBS  | 2468               | 5193 | 2429  | 424   | 17  | 10531     |          | 12.3     | 2169       | 3000  | 2341  | 3021  |    |
| TOT PCT  | 23.4               | 49.3 | 23.1  | 4.0   | .2  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1925-1973  
(OVER-ALL) 1862-1973

MARCH

AREA 0003 CASABLANCA SW  
31.8N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 2.8  | 5.3 | 42.8 | 38.9               | 9.3   | .9    | .0  | 12.0  | 100.0    | 2169      |
| 06009 | 2.6  | 5.7 | 42.8 | 38.6               | 9.5   | .7    | .0  | 11.8  | 100.0    | 3000      |
| 12015 | 1.9  | 5.6 | 37.7 | 41.8               | 11.7  | 1.4   | .0  | 12.8  | 100.0    | 2341      |
| 18021 | 2.3  | 5.1 | 39.3 | 40.6               | 11.7  | .9    | .1  | 12.6  | 100.0    | 3021      |
| TOT   | 253  | 571 | 4283 | 4205               | 1115  | 100   | 4   | 12.3  |          | 10931     |
| PCT   | 2.4  | 5.4 | 40.7 | 39.9               | 10.6  | .9    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 7.3  | 6.3  | 8.9  | 3.1        |              | 4.2                    |
| NE       | 8.5  | 5.3  | 8.7  | 3.6        |              | 4.1                    |
| E        | 1.6  | .8   | 1.6  | .7         |              | 4.0                    |
| SE       | .4   | .4   | 1.0  | .4         |              | 5.1                    |
| S        | 1.0  | .9   | 1.4  | .9         |              | 4.6                    |
| SW       | 3.4  | 2.4  | 3.8  | 1.8        |              | 4.3                    |
| W        | 3.5  | 2.4  | 3.7  | 1.6        |              | 4.2                    |
| NW       | 2.9  | 3.9  | 3.8  | 1.1        |              | 4.1                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | 1.3  | .4   | .7   | .2         |              | 3.2                    |
| TOT OBS  | 1412 | 1092 | 1598 | 625        | 4727         | 4.2                    |
| TOT PCT  | 29.9 | 23.1 | 33.8 | 13.2       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS<0 | TOTAL<br>OBS | MEAN<br>CLTD<br>COVER | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+<br>ANY | NH<br>ANY | 5/8<br>HGT | TOTAL<br>OBS |
|----------|------|------|------|--------------|--------------|-----------------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|------------|--------------|
| N        | 7.3  | 6.3  | 8.9  | 3.1          | 4.2          | .1                    | *          | .1         | 1.2        | 4.0        | 2.5          | .9           | .3           | .1           | .2           | 16.3         |           |            |              |
| NE       | 8.5  | 5.3  | 8.7  | 3.6          | 4.1          | *                     | *          | .1         | .9         | 4.2        | 2.5          | 1.2          | .3           | .1           | .2           | 16.5         |           |            |              |
| E        | 1.6  | .8   | 1.6  | .7           | 4.0          | .0                    | .0         | .0         | .2         | .5         | .5           | .3           | .1           | *            | .1           | 2.9          |           |            |              |
| SE       | .4   | .4   | 1.0  | .4           | 5.1          | .0                    | .0         | *          | .1         | .3         | .1           | .2           | *            | *            | *            | 1.4          |           |            |              |
| S        | 1.0  | .9   | 1.4  | .9           | 4.6          | *                     | *          | *          | .1         | .5         | .5           | .2           | *            | *            | *            | 1.4          |           |            |              |
| SW       | 3.4  | 2.4  | 3.8  | 1.8          | 4.3          | *                     | *          | .1         | .4         | 1.4        | 1.4          | .5           | .1           | .1           | *            | 7.2          |           |            |              |
| W        | 3.5  | 2.4  | 3.7  | 1.6          | 4.2          | .0                    | *          | .2         | .5         | 1.5        | .9           | .6           | .1           | .1           | .1           | 7.3          |           |            |              |
| NW       | 2.9  | 3.9  | 3.8  | 1.1          | 4.1          | *                     | *          | *          | .3         | 1.3        | 1.0          | .6           | .1           | .1           | .2           | 8.0          |           |            |              |
| VAR      | .0   | .0   | .0   | .0           | 4.1          | .0                    | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0           |           |            |              |
| CALM     | 1.3  | .4   | .7   | .2           | 3.2          | .0                    | .0         | .0         | .1         | .2         | .1           | .1           | .0           | *            | *            | 2.1          |           |            |              |
| TOT OBS  | 1412 | 1092 | 1598 | 625          | 4727         | 4.2                   | 7          | 6          | 26         | 189        | 667          | 448          | 207          | 55           | 29           | 51           | 3042      |            | 4727         |
| TOT PCT  | 29.9 | 23.1 | 33.8 | 13.2         | 100.0        | 2.9                   | .1         | .1         | .6         | 4.0        | 14.1         | 9.5          | 4.4          | 1.2          | .6           | 1.1          | 64.4      |            | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | * OR<br>>10 | * OR<br>>5 | * OR<br>>2 | * OR<br>>1 | * OR<br>>1/2 | * OR<br>>1/4 | * OR<br>>50YD | * OR<br>>0 |
| * OR >6500        | 1.5         | 1.8        | 1.8        | 1.8        | 1.8          | 1.8          | 1.8           | 1.8        |
| * OR >5000        | 2.5         | 2.9        | 2.9        | 2.9        | 2.9          | 2.9          | 2.9           | 2.9        |
| * OR >3500        | 6.1         | 7.3        | 7.3        | 7.3        | 7.3          | 7.3          | 7.3           | 7.3        |
| * OR >2000        | 14.1        | 16.5       | 16.8       | 16.8       | 16.8         | 16.8         | 16.8          | 16.8       |
| * OR >1000        | 25.8        | 30.2       | 30.7       | 30.8       | 30.8         | 30.8         | 30.8          | 30.8       |
| * OR >600         | 28.8        | 33.9       | 34.7       | 34.7       | 34.7         | 34.7         | 34.7          | 34.7       |
| * OR >300         | 29.2        | 34.4       | 35.2       | 35.2       | 35.2         | 35.2         | 35.2          | 35.2       |
| * OR >150         | 29.3        | 34.5       | 35.3       | 35.3       | 35.4         | 35.4         | 35.4          | 35.4       |
| * OR >0           | 29.3        | 34.6       | 35.4       | 35.5       | 35.5         | 35.5         | 35.5          | 35.5       |
| TOTAL             | 1425        | 1685       | 1725       | 1727       | 1728         | 1729         | 1729          | 1729       |

TOTAL NUMBER OF OBS: 4868

PCT FREQ NH <5/8: 64.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS | TOTAL<br>OBS |
|--|------|------|------|------|------|-----|-----|-----|------|-----|--------------|
|  | 14.8 | 11.7 | 14.3 | 13.2 | 10.1 | 7.5 | 9.0 | 9.2 | 10.1 | .1  | 5192         |



PERIOD: (PRIMARY) 1925-1973  
(OVER-ALL) 1862-1973

MARCH

AREA 0003 CASABLANCA SW  
31.8N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | *    | .0   | .0  | .0  | .0  | .0   | .0   | *    | .0  | .0   | *     |              |
|              | NO PCP | *    | .0   | .0  | .0  | .0  | .0   | .0   | *    | .0  | .0   | *     |              |
|              | TOT %  | *    | .0   | .0  | .0  | .0  | .0   | .0   | *    | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | *   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | *    | *   | .0  | *   | *    | *    | *    | .0  | .0   | .1    |              |
|              | TOT %  | .0   | *    | *   | .0  | *   | *    | *    | *    | .0  | .0   | .2    |              |
| 1<2          | PCP    | *    | .0   | .0  | .0  | *   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | NO PCP | *    | *    | *   | *   | .0  | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | TOT %  | *    | *    | *   | *   | *   | .0   | .0   | .0   | .0  | .0   | .1    |              |
| 2<5          | PCP    | .1   | .1   | .0  | *   | .1  | .1   | *    | *    | .0  | .0   | .4    |              |
|              | NO PCP | .2   | .2   | .1  | *   | .1  | .2   | .1   | .1   | .0  | .1   | .1    |              |
|              | TOT %  | .3   | .3   | .1  | *   | .1  | .3   | .2   | .1   | .0  | .1   | 1.5   |              |
| 5<10         | PCP    | .2   | .2   | .1  | .1  | .2  | .4   | .3   | .2   | .0  | *    | 1.6   |              |
|              | NO PCP | 3.0  | 4.1  | 1.2 | .5  | 1.0 | 2.0  | 1.9  | 1.5  | .0  | .2   | 15.4  |              |
|              | TOT %  | 3.3  | 4.3  | 1.3 | .6  | 1.2 | 2.3  | 2.2  | 1.7  | .0  | .3   | 17.1  |              |
| 10+          | PCP    | .3   | .1   | .0  | *   | .1  | .1   | .2   | .0   | *   | 1.1  |       |              |
|              | NO PCP | 20.9 | 21.4 | 3.7 | 1.7 | 3.0 | 8.4  | 9.1  | 9.6  | .0  | 2.2  | 80.0  |              |
|              | TOT %  | 21.2 | 21.5 | 3.7 | 1.7 | 3.2 | 8.5  | 9.2  | 9.8  | .0  | 2.2  | 81.1  |              |
| TOT OBS      |        |      |      |     |     |     |      |      |      |     |      |       | 5701         |
| TOT PCT      |        | 24.8 | 26.1 | 5.1 | 2.4 | 4.5 | 11.2 | 11.6 | 11.6 | .0  | 2.6  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | *    | .0   | .0  | .0  | .0  | .0   | .0   | *    | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | *    | .0   | .0  | .0  | .0  | .0   | .0   | *    | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | *   | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | .0   | *    | .0  | .0  | *   | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 11-21      | .0   | *    | *   | .0  | .0  | *    | *    | *    | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | *   | *    | *    | *    | .0  | .0   | .1    |              |
|              | TOT %      | .0   | *    | *   | .0  | *   | .1   | *    | *    | .0  | .0   | .2    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | *    | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | *   | *   | *   | .0   | *    | *    | .0  | .0   | .1    |              |
|              | 11-21      | .0   | *    | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | *    | *    | *    | .0  | .0   | .1    |              |
|              | TOT %      | *    | *    | *   | *   | *   | *    | *    | *    | .0  | .0   | .2    |              |
| 2<5          | 0-3        | *    | *    | *   | *   | *   | *    | *    | *    | .0  | .1   | .2    |              |
|              | 4-10       | .1   | .1   | *   | *   | *   | .1   | .1   | .1   | .0  | .0   | .5    |              |
|              | 11-21      | .1   | .1   | *   | *   | *   | .2   | .1   | *    | .0  | .0   | .6    |              |
|              | 22+        | *    | *    | .0  | *   | .1  | .1   | *    | *    | .0  | .0   | .3    |              |
|              | TOT %      | .2   | .3   | .1  | .1  | .2  | .4   | .3   | .1   | .0  | .1   | 1.7   |              |
| 5<10         | 0-3        | *    | .1   | .1  | .1  | .1  | .1   | .1   | .1   | .0  | .3   | 1.1   |              |
|              | 4-10       | .8   | 1.5  | .5  | .3  | .4  | .7   | .8   | .5   | .0  | .0   | 5.6   |              |
|              | 11-21      | 1.7  | 2.0  | .4  | .2  | .3  | 1.0  | .8   | .8   | .0  | .0   | 7.2   |              |
|              | 22+        | .6   | .6   | .1  | *   | .1  | .4   | .4   | .3   | .0  | .0   | 2.5   |              |
|              | TOT %      | 3.2  | 4.2  | 1.1 | .5  | 1.0 | 2.2  | 2.1  | 1.7  | .0  | .3   | 16.3  |              |
| 10+          | 0-3        | 1.2  | 1.0  | .5  | .2  | .4  | .4   | .4   | .4   | .0  | 2.4  | 6.9   |              |
|              | 4-10       | 8.1  | 7.8  | 1.9 | 1.0 | 1.6 | 3.6  | 4.7  | 5.0  | .0  | .0   | 33.7  |              |
|              | 11-21      | 8.9  | 10.9 | 1.4 | .5  | 1.1 | 3.4  | 3.3  | 3.3  | .0  | .0   | 32.9  |              |
|              | 22+        | 2.4  | 2.5  | .2  | .1  | .1  | .7   | .8   | 1.3  | .0  | .0   | 8.1   |              |
|              | TOT %      | 20.7 | 22.2 | 4.0 | 1.8 | 3.2 | 8.2  | 9.2  | 10.0 | .0  | 2.4  | 81.6  |              |
| TOT OBS      |            |      |      |     |     |     |      |      |      |     |      |       | 7927         |
| TOT PCT      |            | 24.1 | 26.8 | 5.2 | 2.4 | 4.4 | 10.8 | 11.7 | 11.9 | .0  | 2.7  | 100.0 |              |

PERIOD: (PRIMARY) 1925-1973  
(OVER-ALL) 1862-1973

MARCH

AREA 0003 CASABLANCA SW  
31.8N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .3         | .2         | .3         | 3.8        | 12.8         | 6.7          | 3.2          | .9           | .6           | .9    | 29.6  | 70.4               | 1168         |
| 06009          | .3         | .0         | .8         | 5.1        | 16.7         | 9.5          | 4.4          | 1.2          | .8           | 1.5   | 40.3  | 59.7               | 1194         |
| 12015          | .0         | .1         | .5         | 3.4        | 13.4         | 10.9         | 4.5          | 1.1          | .8           | 1.2   | 36.0  | 64.0               | 1366         |
| 18021          | .0         | .2         | .4         | 2.9        | 11.2         | 9.4          | 4.8          | 1.2          | .3           | .8    | 31.2  | 68.8               | 1336         |
| TOT            | 7          | 7          | 26         | 191        | 681          | 466          | 215          | 56           | 31           | 56    | 1736  | 3328               | 5064         |
| PCT            | .1         | .1         | .5         | 3.8        | 13.4         | 9.2          | 4.2          | 1.1          | .6           | 1.1   | 34.3  | 65.7               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .0    | .1  | 2.2 | 17.7 | 80.0 | 1784         |
| 06009          | *    | .3    | .2  | 1.6 | 19.1 | 78.8 | 2188         |
| 12015          | .0   | .2    | .1  | 1.5 | 12.8 | 85.5 | 1929         |
| 18021          | *    | .2    | .2  | 1.4 | 15.6 | 82.5 | 2251         |
| TOT            | 3    | 14    | 13  | 133 | 1332 | 8152 | 8152         |
| PCT            | *    | .2    | .2  | 1.6 | 16.3 | 81.7 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>ANDS+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|----------------|-------------------|--------------|
| 00003          | .3            | .8         | 6.3         | 25.4           | 68.3              | 1110         |
| 06009          | .4            | 1.3        | 7.6         | 34.9           | 57.5              | 1137         |
| 12015          | .0            | .7         | 5.2         | 32.2           | 62.6              | 1324         |
| 18021          | .0            | .7         | 4.6         | 28.1           | 67.3              | 1297         |
| TOT            | 7             | 42         | 285         | 1469           | 3114              | 4868         |
| PCT            | .1            | .9         | 5.9         | 30.2           | 64.0              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | *     | .1    | .0    | *     | *     | .0     | 6            | .1          |
| 70/74  | .0   | .0    | *     | .2    | .6    | .5    | .3    | .1     | 77           | 1.7         |
| 65/69  | .0   | .0    | .1    | .6    | 3.5   | 7.5   | 7.1   | 3.1    | 1015         | 21.9        |
| 60/64  | .0   | *     | .4    | 4.1   | 12.3  | 19.4  | 18.6  | 8.6    | 2944         | 63.5        |
| 55/59  | .0   | .0    | *     | 1.0   | 3.2   | 3.8   | 3.0   | 1.2    | 560          | 12.1        |
| 50/54  | .0   | .0    | .0    | .2    | .2    | .2    | .2    | .1     | 34           | .7          |
| TOTAL  | 0    | 1     | 27    | 275   | 915   | 1456  | 1354  | 608    | 4636         | 100.0       |
| PCT    | .0   | *     | .6    | 5.9   | 19.7  | 31.4  | 29.2  | 13.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM |
|------|------|-----|-----|-----|------|------|------|-----|------|
| .1   | *    | .0  | *   | .0  | .0   | *    | *    | .0  | .0   |
| .3   | .3   | .2  | .1  | .1  | .2   | .3   | .1   | .0  | .1   |
| 3.7  | 4.5  | 1.3 | .8  | 1.3 | 4.5  | 3.3  | 1.9  | .0  | .6   |
| 16.4 | 18.4 | 3.2 | 1.2 | 2.5 | 6.0  | 7.0  | 7.3  | .0  | 1.5  |
| 4.2  | 2.6  | .5  | .3  | .3  | .4   | 1.2  | 2.4  | .0  | .1   |
| .1   | .1   | *   | *   | .1  | .1   | .2   | .2   | .0  | .0   |
| 24.8 | 26.0 | 5.3 | 2.5 | 4.2 | 11.2 | 11.9 | 12.0 | .0  | 2.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 75  | 68  | 65  | 61  | 57 | 54 | 46  | 61.4 | 2207         |
| 06009          | 76  | 68  | 65  | 61  | 57 | 52 | 46  | 61.1 | 3029         |
| 12015          | 81  | 73  | 70  | 64  | 59 | 55 | 46  | 64.3 | 2322         |
| 18021          | 78  | 72  | 69  | 63  | 58 | 55 | 47  | 63.1 | 3009         |
| TOT            | 81  | 71  | 68  | 62  | 57 | 54 | 46  | 62.5 | 10567        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 5.1   | 16.7  | 27.6  | 31.8  | 18.9  | 79    | 1124   |      |              |
| 06009          | .0   | 5.0   | 15.7  | 31.1  | 33.2  | 14.9  | 79    | 1175   |      |              |
| 12015          | .0   | 8.3   | 24.3  | 35.3  | 23.5  | 8.7   | 74    | 1244   |      |              |
| 18021          | .0   | 7.2   | 21.7  | 32.8  | 28.3  | 10.1  | 76    | 1272   |      |              |
| TOT            | 0    | 310   | 951   | 1532  | 1399  | 623   | 77    | 4815   |      |              |

PERIOD: (PRIMARY) 1925-1973  
(OVER-ALL) 1862-1973

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31.8N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .0       | 5     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .0       | .0       | 12    | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .0       | .0       | 16    | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .1       | .1       | .3       | .6       | .0       | .0       | .0       | 58    | .0       | 1.1       |
| 6                  | .0       | .0       | .0       | .0       | .1       | .4       | .5       | .0       | .0       | .0       | 54    | .0       | 1.0       |
| 5                  | .0       | .0       | .0       | .1       | .3       | 1.2      | .4       | .1       | .0       | .0       | 112   | .0       | 2.1       |
| 4                  | .0       | .0       | .0       | .0       | .7       | 1.7      | .5       | .0       | .0       | .0       | 152   | .0       | 2.8       |
| 3                  | .0       | .0       | .0       | .0       | .6       | 2.2      | .4       | .0       | .0       | .0       | 172   | .0       | 3.2       |
| 2                  | .0       | .0       | .0       | .1       | 2.4      | 3.6      | .4       | .0       | .0       | .0       | 347   | .1       | 6.4       |
| 1                  | .0       | .0       | .0       | .2       | 5.2      | 4.5      | .2       | .0       | .0       | .0       | 544   | .1       | 10.0      |
| 0                  | .0       | .0       | .0       | .7       | 10.6     | 3.3      | .2       | .0       | .0       | .0       | 797   | .2       | 14.7      |
| -1                 | .0       | .0       | .0       | 1.9      | 12.5     | 2.0      | .0       | .0       | .0       | .0       | 879   | .1       | 16.4      |
| -2                 | .0       | .0       | .0       | .4       | 2.2      | 9.6      | .9       | .1       | .0       | .0       | 794   | .0       | 14.8      |
| -3                 | .0       | .0       | .1       | 4.8      | 5.2      | .5       | .0       | .0       | .0       | .0       | 572   | .0       | 10.7      |
| -4                 | .0       | .0       | .1       | 3.2      | 2.7      | .2       | .0       | .0       | .0       | .0       | 338   | .0       | 6.3       |
| -5                 | .0       | .1       | .2       | 2.4      | 1.6      | .1       | .0       | .0       | .0       | .0       | 235   | .0       | 4.4       |
| -6                 | .0       | .0       | .4       | 1.1      | .3       | .0       | .0       | .0       | .0       | .0       | 94    | .0       | 1.8       |
| -7/-8              | .0       | .1       | .6       | .9       | .6       | .0       | .0       | .0       | .0       | .0       | 117   | .1       | 2.1       |
| -9/-10             | .0       | .1       | .2       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 28    | .0       | .5        |
| -11/-13            | .0       | .1       | .2       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 20    | .0       | .4        |
| -14/-16            | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 6     | .0       | .1        |
| TOTAL              | 3        | 19       | 102      | 1074     | 2814     | 1125     | 190      | 17       | 8        | 2        | 5352  | 37       | 5315      |
| PCT                | .1       | .4       | 1.9      | 20.1     | 52.6     | 21.0     | 3.6      | .3       | .1       | .0       | 100.0 | .7       | 99.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|---------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 1.5  | .1    | .0    | .0    | .0  | 1.9  | <1      | .4  | 1.5  | .2    | .0    | .0    | .0  | 2.1  |
| 1-2     | .5  | 4.9  | 1.7   | .0    | .0    | .0  | 7.1  | 1-2     | .3  | 4.4  | 2.2   | .0    | .0    | .0  | 6.9  |
| 3-4     | .0  | 2.6  | 4.9   | .3    | .0    | .0  | 7.8  | 3-4     | .0  | 2.8  | 5.2   | .2    | .0    | .0  | 8.2  |
| 5-6     | .0  | .4   | 3.3   | .7    | .1    | .0  | 4.5  | 5-6     | .0  | .4   | 3.8   | .6    | .1    | .0  | 4.9  |
| 7       | .0  | .1   | 1.5   | .6    | .0    | .0  | 2.2  | 7       | .0  | .1   | 2.4   | 1.0   | .2    | .0  | 3.7  |
| 8-9     | .0  | .1   | .7    | .7    | .0    | .0  | 1.5  | 8-9     | .0  | .0   | .6    | .5    | .0    | .0  | 1.2  |
| 10-11   | .0  | .0   | .2    | .5    | .1    | .0  | .8   | 10-11   | .0  | .0   | .2    | .5    | .0    | .0  | .7   |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .3   | 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .1    | .3    | .1    | .0  | .5   | 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .4   |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .9  | 9.6  | 12.4  | 3.4   | .3    | .0  | 26.6 | TOT PCT | .8  | 9.3  | 14.6  | 3.4   | .3    | .0  | 28.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|---------|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .4   | .0    | .0    | .0    | .0  | .6  | <1      | .0  | .5   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .2  | 1.5  | .3    | .0    | .0    | .0  | 1.9 | 1-2     | .0  | .7   | .1    | .0    | .0    | .0  | .9  |
| 3-4     | .1  | .6   | .7    | .0    | .0    | .0  | 1.4 | 3-4     | .0  | .2   | .1    | .0    | .0    | .0  | .3  |
| 5-6     | .0  | .1   | .6    | .1    | .0    | .0  | .8  | 5-6     | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | 7       | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1  | 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 2.5  | 2.0   | .1    | .0    | .0  | 5.1 | TOT PCT | .0  | 1.5  | .6    | .1    | .0    | .0  | 2.2 |



PERIOD: (OVER-ALL) 1963-1973

MARCH

AREA 0003 CASABLANCA SW  
31.8N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     |  | SW  |      |       |       |       |     |      |  |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|------|--|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |
| <1      | .3  | .5   | .0    | .0    | .0    | .0  | .9  |  | .3  | .7   | .1    | .0    | .0    | .0  | 1.1  |  |
| 1-2     | .2  | 1.0  | .1    | .0    | .0    | .0  | 1.3 |  | .2  | 2.3  | 1.1   | .0    | .0    | .0  | 3.6  |  |
| 3-4     | .0  | .4   | .6    | .1    | .0    | .0  | 1.1 |  | .0  | 1.1  | 1.8   | .1    | .0    | .0  | 3.0  |  |
| 5-6     | .0  | .1   | .2    | .1    | .0    | .0  | .4  |  | .0  | .1   | 1.1   | .1    | .0    | .0  | 1.4  |  |
| 7       | .0  | .0   | .1    | .1    | .0    | .0  | .1  |  | .0  | .5   | .3    | .0    | .0    | .0  | .8   |  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .2   | .2    | .0    | .0    | .0  | .4   |  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .2    | .0    | .0    | .0  | .2   |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .1   |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| TOT PCT | .5  | 2.0  | 1.0   | .2    | .0    | .0  | 3.9 |  | .5  | 4.3  | 4.9   | .9    | .1    | .0  | 10.6 |  |

| HGT     | W   |      |       |       |       |     |     |  | NW  |      |       |       |       |     |      |      | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|------|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |      |           |
| <1      | .3  | 1.1  | .1    | .0    | .0    | .0  | 1.5 |  | .3  | .9   | .2    | .0    | .0    | .0  | 1.5  |      |           |
| 1-2     | .1  | 2.2  | .7    | .0    | .0    | .0  | 3.0 |  | .1  | 2.2  | .6    | .0    | .0    | .0  | 2.9  |      |           |
| 3-4     | .0  | 1.1  | 1.2   | .1    | .0    | .0  | 2.3 |  | .0  | 1.2  | 1.6   | .3    | .0    | .0  | 3.1  |      |           |
| 5-6     | .0  | .1   | 1.0   | .3    | .0    | .0  | 1.4 |  | .0  | .1   | .8    | .3    | .0    | .0  | 1.3  |      |           |
| 7       | .0  | .0   | .4    | .2    | .0    | .0  | .6  |  | .0  | .1   | .4    | .2    | .0    | .0  | .7   |      |           |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .3  |  | .0  | .0   | .2    | .1    | .0    | .0  | .3   |      |           |
| 10-11   | .0  | .0   | .0    | .1    | .1    | .0  | .2  |  | .0  | .0   | .0    | .2    | .0    | .0  | .3   |      |           |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .2  |  | .0  | .0   | .0    | .0    | .0    | .0  | .1   |      |           |
| 13-16   | .0  | .0   | .1    | .0    | .0    | .0  | .1  |  | .0  | .0   | .0    | .2    | .1    | .0  | .2   |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| TOT PCT | .4  | 4.5  | 3.6   | 1.0   | .1    | .0  | 9.7 |  | .4  | 4.6  | 3.9   | 1.4   | .1    | .0  | 10.4 | 96.9 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.7 | 7.1  | .6    | .0    | .0    | .0  | 14.4  |         |
| 1-2     | 1.7 | 19.0 | 6.8   | .0    | .0    | .0  | 27.5  |         |
| 3-4     | .2  | 9.8  | 15.8  | 1.1   | .0    | .0  | 26.9  |         |
| 5-6     | .0  | 1.4  | 10.8  | 2.0   | .2    | .0  | 14.4  |         |
| 7       | .0  | .3   | 5.5   | 2.4   | .2    | .0  | 8.3   |         |
| 8-9     | .0  | .1   | 2.0   | 1.7   | .1    | .0  | 3.9   |         |
| 10-11   | .0  | .1   | .5    | 1.5   | .2    | .0  | 2.3   |         |
| 12      | .0  | .0   | .1    | .6    | .1    | .0  | .8    |         |
| 13-16   | .0  | .1   | .2    | .8    | .1    | .0  | 1.3   |         |
| 17-19   | .0  | .0   | .0    | .1    | .1    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.7 | 38.0 | 42.2  | 10.2  | .9    | .0  | 100.0 | 2972    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 6.2  | 7.7  | 3.7  | 2.7  | 1.0  | .2    | .1  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 920   | 4        |
| 6-7          | .0  | .6   | 3.3  | 6.6  | 5.3  | 2.8  | 1.6   | .4  | .7    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 829   | 6        |
| 8-9          | .0  | .2   | 2.1  | 3.4  | 4.2  | 2.2  | 1.4   | 1.1 | 1.0   | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 613   | 7        |
| 10-11        | .0  | .6   | .9   | 1.5  | 2.0  | 1.2  | .9    | .9  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 387   | 8        |
| 12-13        | .0  | .0   | .8   | .8   | .8   | .8   | 1.0   | .4  | .5    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 209   | 8        |
| >13          | .0  | .0   | .0   | .3   | .6   | .3   | .4    | .2  | .7    | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 104   | 10       |
| INDET        | 2.7 | 3.3  | 4.3  | 3.0  | 3.0  | 1.9  | 1.1   | .4  | .7    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 807   | 5        |
| TOTAL        | 181 | 423  | 739  | 746  | 728  | 426  | 269   | 134 | 171   | 34    | 10    | 5     | 3     | 0     | 0     | 0     | 0     | 0     | 0   | 3869  | 6        |
| PCT          | 4.7 | 10.9 | 19.1 | 19.3 | 18.8 | 11.0 | 7.0   | 3.5 | 4.4   | .9    | .3    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1856-1973

APRIL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .5   | .8        | .5   | .0        | .0   | .0              | .0   | 1.9             | 2.0            | .4                      | .6          | .0                  | .7         | .0                   | 94.5       |
| NE                 | .1   | .4        | .1   | .0        | .0   | .0              | .0   | .7              | .7             | .2                      | 1.5         | .0                  | .6         | .0                   | 96.4       |
| E                  | .0   | .9        | .0   | .0        | .0   | .0              | .0   | .9              | 1.9            | 1.3                     | 4.4         | .0                  | .0         | .0                   | 91.6       |
| SE                 | 1.7  | 2.8       | 2.3  | .0        | .0   | .0              | .0   | 6.8             | .6             | .0                      | .0          | .0                  | .6         | .0                   | 92.0       |
| S                  | 2.7  | 6.7       | .0   | .0        | .0   | .0              | .0   | 9.4             | 2.0            | 3.2                     | .0          | .0                  | 1.5        | .0                   | 84.0       |
| SW                 | .8   | 3.4       | .4   | .0        | .0   | .0              | .0   | 4.7             | 1.9            | .9                      | 1.3         | .0                  | 1.0        | .0                   | 90.4       |
| W                  | 1.9  | 3.7       | .7   | .0        | .0   | .0              | .0   | 6.1             | 3.0            | 1.3                     | .4          | .0                  | .2         | .0                   | 89.4       |
| NW                 | 2.2  | 2.4       | .4   | .0        | .0   | .0              | .0   | 5.0             | 4.5            | .9                      | 1.0         | .0                  | .5         | .0                   | 88.3       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | 1.1       | .0   | .0        | .0   | .0              | .0   | 1.1             | 1.1            | 1.1                     | .0          | .0                  | 1.1        | .0                   | 95.6       |
| TOT PCT            | .8   | 1.4       | .4   | .0        | .0   | .0              | .0   | 2.6             | 2.0            | .6                      | .9          | .0                  | .6         | .0                   | 93.3       |
| TOT OBS:           | 5345 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THOR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .9                 | 1.3          | .5   | .0           | .0   | .0                    | .0   | 2.6                | 1.6                     | 1.3          | .8                | .0                        | .6            | .0                                    | 93.1             |
| 06009         | 1.2                | 1.8          | .5   | .0           | .0   | .0                    | .0   | 3.6                | 2.0                     | .8           | 1.3               | .0                        | .4            | .0                                    | 91.9             |
| 12015         | .6                 | .9           | .3   | .0           | .0   | .0                    | .0   | 1.8                | 2.1                     | .0           | .8                | .0                        | .9            | .0                                    | 94.5             |
| 18021         | .5                 | 1.5          | .3   | .0           | .0   | .0                    | .0   | 2.3                | 2.2                     | .1           | .7                | .0                        | .6            | .0                                    | 94.2             |
| TOT PCT       | .8                 | 1.4          | .4   | .0           | .0   | .0                    | .0   | 2.6                | 2.0                     | .5           | .9                | .0                        | .6            | .0                                    | 93.4             |
| TOT OBS:      | 5476               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       |      |       |       | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |    |  |  |  |  |
|----------|--------------------|------|-------|-------|-------|----|-------|------|-------|-------|-------|--------------|-------------|-------------|------------|-------|----|--|--|--|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    | 06   | 09    | 12    |       |              |             |             | 15         | 18    | 21 |  |  |  |  |
| N        | 1.2                | 13.1 | 18.6  | 3.3   | .2    | .0 | 36.4  | 13.1 | 36.4  | 45.1  | 36.4  | 33.4         | 35.9        | 42.9        | 38.2       | 33.9  |    |  |  |  |  |
| NE       | .7                 | 8.3  | 15.2  | 3.7   | .1    | .0 | 28.1  | 14.2 | 28.8  | 28.9  | 27.6  | 29.7         | 29.0        | 23.2        | 26.9       | 27.3  |    |  |  |  |  |
| E        | .2                 | 1.1  | .8    | .1    | .0    | .0 | 2.1   | 10.4 | 2.4   | 1.6   | 2.2   | 2.6          | 2.2         | .5          | 1.8        | 2.0   |    |  |  |  |  |
| SE       | .2                 | .4   | .3    | *     | .0    | .0 | .9    | 8.5  | .6    | .8    | .7    | 1.1          | 1.4         | .5          | .7         | .7    |    |  |  |  |  |
| S        | .2                 | 1.0  | .6    | .2    | .0    | .0 | 2.1   | 11.3 | 1.8   | .8    | 1.9   | 2.9          | 2.3         | 3.8         | 2.0        | 1.5   |    |  |  |  |  |
| SW       | .3                 | 2.4  | 2.2   | .6    | *     | .0 | 5.5   | 12.1 | 4.2   | 1.8   | 5.5   | 6.2          | 5.8         | 3.6         | 5.9        | 6.9   |    |  |  |  |  |
| W        | .6                 | 4.2  | 2.8   | .8    | .1    | .0 | 8.5   | 11.5 | 8.4   | 7.7   | 8.3   | 9.1          | 7.9         | 8.2         | 8.7        | 9.7   |    |  |  |  |  |
| NW       | .8                 | 6.9  | 5.2   | 1.4   | .1    | .0 | 14.4  | 11.8 | 14.9  | 11.8  | 15.2  | 13.6         | 13.3        | 16.6        | 14.2       | 15.5  |    |  |  |  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 | .0    | .0   | .0    | .0    | .0    | .0           | .0          | .0          | .0         | .0    |    |  |  |  |  |
| CALM     | 2.0                |      |       |       |       |    | 2.0   | .0   | 2.5   | 1.6   | 2.0   | 1.4          | 2.1         | .7          | 1.8        | 2.6   |    |  |  |  |  |
| TOT OBS  | 608                | 3717 | 4529  | 1003  | 52    | 0  | 9909  | 12.6 | 1907  | 127   | 1914  | 881          | 2005        | 152         | 2030       | 893   |    |  |  |  |  |
| TOT PCT  | 6.1                | 37.5 | 45.7  | 10.1  | .5    | .0 | 100.0 |      | 100.0 | 100.0 | 100.0 | 100.0        | 100.0       | 100.0       | 100.0      | 100.0 |    |  |  |  |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    |      | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |      |       |       |       |
|----------|--------------------|------|-------|-------|----|------|-----|-----------|----------|----------|------------|------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |      |     |           |          |          | 00         | 03   | 06    | 12    | 18    |
| N        | 5.3                | 20.5 | 9.6   | 1.0   | *  |      |     |           |          |          | 36.4       | 13.1 | 37.0  | 35.5  | 36.4  |
| NE       | 3.1                | 14.7 | 9.4   | .9    | *  |      |     |           |          |          | 28.1       | 14.2 | 28.8  | 28.3  | 28.6  |
| E        | .6                 | 1.2  | .4    | .0    | .0 |      |     |           |          |          | 2.1        | 10.4 | 2.4   | 2.4   | 2.1   |
| SE       | .4                 | .4   | .1    | .0    | .0 |      |     |           |          |          | .9         | 8.5  | .6    | .8    | 1.3   |
| S        | .6                 | 1.0  | .4    | *     | .0 |      |     |           |          |          | 2.1        | 11.3 | 1.7   | 2.3   | 2.4   |
| SW       | 1.3                | 2.9  | 1.2   | .1    | *  |      |     |           |          |          | 5.5        | 12.1 | 4.0   | 5.7   | 5.7   |
| W        | 2.4                | 4.2  | 1.6   | .3    | *  |      |     |           |          |          | 8.5        | 11.5 | 8.3   | 8.6   | 7.9   |
| NW       | 3.5                | 7.6  | 3.0   | .4    | *  |      |     |           |          |          | 14.4       | 11.8 | 14.7  | 14.7  | 13.6  |
| VAR      | .0                 | .0   | .0    | .0    | .0 |      |     |           |          |          | .0         | .0   | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |    |      |     |           |          |          | 2.0        | .0   | .0    | .0    | .0    |
| TOT OBS  | 1904               | 5191 | 2534  | 269   | 11 | 9909 |     |           |          |          | 2.5        | 1.8  | 2.0   | 2.0   | 2.0   |
| TOT PCT  | 19.2               | 52.4 | 25.6  | 2.7   | .1 |      |     |           |          |          | 100.0      |      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1856-1973

APRIL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOURL | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 2.5  | 3.8 | 36.6 | 47.1               | 9.4   | .5    | .0  | 12.5  | 100.0    | 2034      |
| 06009 | 1.8  | 4.7 | 41.1 | 42.5               | 9.5   | .5    | .0  | 12.3  | 100.0    | 2795      |
| 12015 | 2.0  | 3.7 | 35.0 | 48.2               | 10.7  | .5    | .0  | 13.0  | 100.0    | 2157      |
| 18021 | 2.0  | 4.1 | 36.6 | 45.9               | 10.8  | .5    | .0  | 12.8  | 100.0    | 2923      |
| TOT   | 202  | 406 | 3717 | 4529               | 1003  | 52    | 0   | 12.6  |          | 9909      |
| PCT   | 2.0  | 4.1 | 37.5 | 45.7               | 10.1  | .5    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL CLOUD OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------------|------------------|
| N        | 9.9  | 9.5  | 14.8 | 7.6  |                 | 4.6              |
| NE       | 7.4  | 5.8  | 9.7  | 3.9  |                 | 4.4              |
| E        | .4   | .3   | .4   | .1   |                 | 4.1              |
| SE       | .2   | .1   | .3   | .2   |                 | 4.7              |
| S        | .4   | .3   | .7   | .5   |                 | 5.1              |
| SW       | 1.5  | .9   | 1.5  | .6   |                 | 4.2              |
| W        | 2.1  | 1.9  | 2.6  | .7   |                 | 4.1              |
| NW       | 3.1  | 4.0  | 5.1  | 1.7  |                 | 4.4              |
| VAR      | .0   | .0   | .0   | .0   |                 | .0               |
| CALM     | .6   | .5   | .6   | .2   |                 | 3.8              |
| TOT OBS  | 1158 | 1054 | 1614 | 702  | 4528            | 4.4              |
| TOT PCT  | 25.6 | 23.3 | 35.6 | 15.5 | 100.0           |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .0  | *   | .2  | 2.3 | 7.4  | 5.7  | 2.2  | .4   | .2   | .1    | 23.2    |       |
| NE      | .0  | *   | .1  | 1.0 | 4.3  | 3.5  | 1.6  | .5   | .2   | .2    | 15.6    |       |
| E       | .0  | .0  | .0  | .1  | .1   | .1   | *    | *    | .0   | *     | .8      |       |
| SE      | .0  | .0  | *   | .1  | *    | .1   | *    | *    | .0   | .0    | .5      |       |
| S       | .0  | .0  | *   | .1  | .3   | .2   | .1   | .1   | *    | .0    | 1.0     |       |
| SW      | .0  | .0  | *   | .1  | .6   | .4   | .2   | *    | .0   | .1    | 3.1     |       |
| W       | .0  | .0  | *   | .5  | .7   | .7   | .4   | .1   | .1   | .1    | 4.8     |       |
| NW      | .1  | .0  | .1  | .6  | 1.8  | 1.6  | .7   | .2   | .1   | *     | 8.8     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .0  | .0  | .0  | *   | .1   | .2   | .1   | *    | .0   | .0    | 1.3     |       |
| TOT OBS | 4   | 2   | 20  | 222 | 693  | 562  | 234  | 62   | 27   | 24    | 2678    | 4528  |
| TOT PCT | .1  | *   | .4  | 4.9 | 15.3 | 12.4 | 5.2  | 1.4  | .6   | .5    | 59.1    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .9        | 1.1  | 1.1  | 1.1  | 1.1  | 1.1  | 1.1   | 1.1  |
| >5000          | 2.1       | 2.5  | 2.5  | 2.5  | 2.5  | 2.5  | 2.5   | 2.5  |
| >3500          | 6.6       | 7.6  | 7.6  | 7.6  | 7.6  | 7.6  | 7.6   | 7.6  |
| >2000          | 17.0      | 19.7 | 19.9 | 20.0 | 20.0 | 20.0 | 20.0  | 20.0 |
| >1000          | 30.1      | 34.7 | 35.1 | 35.1 | 35.1 | 35.1 | 35.1  | 35.1 |
| >600           | 33.9      | 39.4 | 40.0 | 40.0 | 40.0 | 40.0 | 40.0  | 40.0 |
| >300           | 34.2      | 39.8 | 40.4 | 40.5 | 40.5 | 40.5 | 40.5  | 40.5 |
| >150           | 34.2      | 39.9 | 40.4 | 40.5 | 40.5 | 40.5 | 40.5  | 40.5 |
| >0             | 34.2      | 39.9 | 40.5 | 40.6 | 40.6 | 40.6 | 40.6  | 40.6 |
| TOTAL          | 1579      | 1842 | 1871 | 1874 | 1874 | 1874 | 1874  | 1874 |

TOTAL NUMBER OF OBS: 4617

PCT FREQ NH <5/8: 59.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1   | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS | TOTAL |
|--|------|-----|------|------|------|-----|-----|-----|------|-----|-------|
|  |      |     |      |      |      |     |     |     |      |     |       |
|  | 12.4 | 9.7 | 12.6 | 13.0 | 11.4 | 8.8 | 9.6 | 9.8 | 12.8 | *   | 4861  |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1856-1973

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31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .1   | .0  | .0 | .0  | .1  | .0  | .0   | .0  | .0   | .0    | .3           |
|              | TOT %  | .0   | .1   | .0  | .0 | .0  | .1  | .0  | .0   | .0  | .0   | .0    | .3           |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .1  | .0   | .0  | .0   | .0    | .2           |
|              | NO PCP | .3   | .2   | .0  | .0 | .0  | .0  | .0  | .1   | .0  | .0   | .0    | .7           |
|              | TOT %  | .4   | .2   | .0  | .0 | .1  | .0  | .1  | .2   | .0  | .0   | .0    | .9           |
| 5<10         | PCP    | .2   | .0   | .0  | .0 | .1  | .2  | .2  | .4   | .0  | .0   | .0    | 1.2          |
|              | NO PCP | 6.3  | 4.2  | .3  | .2 | .3  | .5  | 1.4 | 1.7  | .0  | .1   | 14.9  |              |
|              | TOT %  | 6.5  | 4.2  | .3  | .2 | .4  | .7  | 1.6 | 2.0  | .0  | .1   | 16.1  |              |
| 10+          | PCP    | .5   | .1   | .0  | .0 | .0  | .2  | .3  | .0   | .0  | .0   | .0    | 1.2          |
|              | NO PCP | 33.6 | 22.4 | 1.1 | .6 | 1.4 | 3.6 | 5.9 | 11.4 | .0  | 1.5  | 81.4  |              |
|              | TOT %  | 34.0 | 22.5 | 1.1 | .6 | 1.4 | 3.7 | 6.1 | 11.7 | .0  | 1.5  | 82.6  |              |
| TOT OBS      |        |      |      |     |    |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |     |    |     |     |     |      |     |      |       |              |
|              |        | 41.0 | 27.0 | 1.5 | .8 | 1.9 | 4.5 | 7.8 | 13.9 | .0  | 1.6  | 100.0 | 5338         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .1   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .1   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .2           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
| 2<5          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | .0  | .0 | .0  | .1  | .0  | .1   | .0  | .0   | .0    | .3           |
|              | 11-21      | .2   | .1   | .0  | .0 | .0  | .0  | .0  | .1   | .0  | .0   | .0    | .5           |
|              | 22+        | .1   | .1   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .3           |
|              | TOT %      | .4   | .2   | .0  | .0 | .0  | .1  | .1  | .2   | .0  | .0   | .0    | 1.1          |
| 5<10         | 0-3        | .2   | .1   | .0  | .0 | .0  | .0  | .0  | .1   | .0  | .0   | .0    | .7           |
|              | 4-10       | 1.3  | 1.1  | .2  | .1 | .1  | .3  | .6  | .7   | .0  | .0   | .0    | 4.5          |
|              | 11-21      | 3.4  | 2.4  | .1  | .1 | .1  | .4  | .6  | .8   | .0  | .0   | .0    | 7.8          |
|              | 22+        | .9   | .8   | .0  | .0 | .1  | .1  | .3  | .3   | .0  | .0   | .0    | 2.5          |
|              | TOT %      | 5.8  | 4.4  | .4  | .1 | .4  | .9  | 1.5 | 1.9  | .0  | .2   | .0    | 15.6         |
| 10+          | 0-3        | .7   | .4   | .1  | .1 | .2  | .2  | .4  | .6   | .0  | .0   | .0    | 4.5          |
|              | 4-10       | 11.5 | 6.3  | .9  | .3 | .8  | 2.0 | 3.5 | 5.8  | .0  | .0   | .0    | 31.4         |
|              | 11-21      | 16.5 | 13.1 | .7  | .2 | .5  | 1.7 | 2.5 | 4.4  | .0  | .0   | .0    | 39.6         |
|              | 22+        | 2.4  | 2.7  | .0  | .0 | .1  | .4  | .7  | 1.2  | .0  | .0   | .0    | 7.5          |
|              | TOT %      | 31.2 | 22.7 | 1.7 | .7 | 1.5 | 4.3 | 7.2 | 12.0 | .0  | 1.7  | .0    | 83.0         |
| TOT OBS      |            |      |      |     |    |     |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |     |    |     |     |     |      |     |      |       |              |
|              |            | 37.5 | 27.5 | 2.1 | .8 | 1.9 | 5.3 | 8.8 | 14.1 | .0  | 1.9  | 100.0 | 7393         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1856-1973

APRIL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>399 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00603         | .1         | .0         | .5         | 5.0        | 14.4         | 9.6          | 4.3          | 1.0          | .5           | .6    | 35.9  | 64.1                | 1083         |
| 06609         | .0         | .1         | .6         | 6.6        | 18.4         | 16.4         | 5.7          | 1.6          | .3           | .5    | 50.1  | 49.9                | 1141         |
| 12615         | .1         | .0         | .2         | 3.6        | 13.2         | 11.9         | 5.3          | 1.5          | .8           | .5    | 37.0  | 63.0                | 1275         |
| 18621         | .2         | .1         | .4         | 4.1        | 13.5         | 10.3         | 4.6          | 1.3          | .7           | .5    | 35.7  | 64.3                | 1250         |
| TOT           | 4          | 2          | 20         | 226        | 703          | 572          | 237          | 64           | 27           | 24    | 1879  | 2870                | 4749         |
| PCT           | .1         | *          | .4         | 4.8        | 14.8         | 12.0         | 5.0          | 1.3          | .6           | .5    | 39.6  | 60.4                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00603         | .1   | .2    | .1  | 1.1 | 15.4 | 83.1 | 1661         |
| 06609         | .1   | .3    | .1  | 1.3 | 17.7 | 80.4 | 2002         |
| 12615         | .1   | .1    | .1  | .8  | 13.7 | 85.2 | 1765         |
| 18621         | .0   | .1    | *   | 1.1 | 15.6 | 83.1 | 2096         |
| TOT           | 5    | 14    | 8   | 85  | 1177 | 6235 | 7524         |
| PCT           | .1   | .2    | .1  | 1.1 | 15.6 | 82.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00603         | .1            | .7         | 6.6         | 31.3            | 62.1               | 1035         |
| 06609         | .0            | .7         | 8.6         | 42.8            | 48.6               | 1112         |
| 12615         | .1            | .3         | 4.3         | 33.7            | 62.0               | 1246         |
| 18621         | .2            | .7         | 5.7         | 31.2            | 63.1               | 1224         |
| TOT           | 4             | 27         | 287         | 1602            | 2728               | 4617         |
| PCT           | .1            | .6         | 6.2         | 34.7            | 59.1               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | *     | *     | .1    | .0    | .0     | 8            | .2          |
| 70/74  | .0   | .0    | .1    | .3    | .7    | .1    | .0    | .0     | 84           | 2.0         |
| 65/69  | .0   | *     | .1    | 1.0   | 5.0   | 8.4   | 6.4   | 2.3    | 995          | 23.2        |
| 60/64  | .0   | *     | .2    | 2.8   | 14.8  | 24.4  | 17.6  | 5.8    | 2819         | 65.6        |
| 55/59  | .0   | .0    | *     | .7    | 2.5   | 2.8   | 1.9   | .9     | 383          | 8.9         |
| 50/54  | .0   | .0    | .0    | .0    | .0    | .1    | .1    | *      | 7            | .2          |
| TOTAL  | 0    | 3     | 19    | 205   | 989   | 1570  | 1121  | 389    | 4296         | 100.0       |
| PCT    | .0   | .1    | .4    | 4.8   | 23.0  | 36.5  | 26.1  | 9.1    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM |
|------|------|-----|----|-----|-----|-----|------|-----|------|
| .1   | *    | .0  | .0 | *   | .0  | .1  | *    | .0  | .0   |
| .8   | .5   | *   | *  | .1  | .1  | .2  | .2   | .0  | *    |
| 8.2  | 7.5  | .3  | .3 | .7  | 1.5 | 1.9 | 2.6  | .0  | .2   |
| 29.0 | 18.2 | .7  | .3 | .9  | 2.7 | 4.3 | 8.8  | .0  | .7   |
| 3.7  | 1.0  | .2  | .1 | .2  | .3  | .9  | 2.4  | .0  | .2   |
| *    | .0   | .0  | .0 | .0  | .0  | .1  | *    | .0  | *    |
| 41.8 | 27.2 | 1.3 | .7 | 1.9 | 4.6 | 7.3 | 14.1 | .0  | 1.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00603         | 78  | 68  | 65  | 62  | 58 | 56 | 53  | 61.8 | 2067         |
| 06609         | 75  | 68  | 66  | 62  | 58 | 55 | 52  | 61.7 | 2803         |
| 12615         | 82  | 74  | 71  | 65  | 60 | 57 | 53  | 65.0 | 2107         |
| 18621         | 79  | 73  | 69  | 64  | 59 | 56 | 52  | 63.9 | 2870         |
| TOT           | 82  | 72  | 69  | 63  | 58 | 56 | 52  | 63.1 | 9847         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00603         | .0   | 3.0   | 18.9  | 37.0  | 30.4  | 10.6   | 77   | 1052         |
| 06609         | .0   | 3.6   | 18.2  | 38.4  | 28.4  | 11.4   | 77   | 1082         |
| 12615         | .0   | 9.5   | 30.9  | 32.7  | 20.5  | 6.4    | 73   | 1110         |
| 18621         | .0   | 5.0   | 24.0  | 37.3  | 25.4  | 8.3    | 75   | 1150         |
| TOT           | 0    | 234   | 1015  | 1597  | 1147  | 401    | 75   | 4394         |

## APRIL

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1856-1973

TABLE 17

AREA 0003 CASABLANCA SW  
31.7N 13.1WPCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | *        | .0       | *        | .0       | .0       | 3     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | .1       | *        | .0       | 9     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .1       | .1       | .0       | .0       | 18    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .1       | .2       | .6       | .3       | .0       | .0       | 57    | .0       | 1.2       |
| 6                  | .0       | .0       | .0       | .1       | .3       | .3       | *        | .0       | .0       | 36    | *        | .7        |
| 5                  | .0       | .0       | *        | .2       | .7       | *        | *        | .0       | .0       | 82    | .0       | 1.7       |
| 4                  | .0       | .0       | *        | .5       | 1.2      | .5       | .1       | .0       | .0       | 114   | .0       | 2.3       |
| 3                  | .0       | .0       | .1       | .9       | 1.9      | .3       | *        | .0       | .0       | 157   | .0       | 3.2       |
| 2                  | .0       | .0       | *        | 2.3      | 4.4      | .3       | *        | .0       | .0       | 345   | *        | 7.0       |
| 1                  | .0       | .0       | .3       | 4.0      | 4.4      | .2       | .0       | .0       | .0       | 434   | .1       | 8.9       |
| 0                  | .0       | .0       | .5       | 10.3     | 4.0      | .1       | .0       | .0       | .0       | 723   | .2       | 14.7      |
| -1                 | .0       | *        | 1.7      | 14.3     | 2.6      | *        | *        | .0       | .0       | 912   | .2       | 18.5      |
| -2                 | .0       | *        | 3.1      | 11.2     | 1.0      | .1       | .0       | .0       | .0       | 752   | .2       | 15.3      |
| -3                 | .0       | .1       | 4.0      | 5.8      | .7       | *        | .0       | .0       | .0       | 516   | .1       | 10.5      |
| -4                 | .0       | .1       | 2.5      | 3.5      | .2       | .0       | .0       | .0       | .0       | 308   | *        | 6.3       |
| -5                 | .0       | .2       | 2.1      | 2.0      | .1       | .0       | .0       | .0       | .0       | 215   | *        | 4.4       |
| -6                 | .0       | .2       | .9       | .4       | .0       | *        | .0       | .0       | .0       | 75    | .0       | 1.5       |
| -7/-8              | .0       | .4       | .6       | .5       | *        | .0       | .0       | .0       | .0       | 77    | .0       | 1.6       |
| -9/-10             | .0       | .1       | .1       | .1       | *        | .0       | .0       | .0       | .0       | 18    | .0       | .4        |
| -11/-13            | .1       | .1       | *        | .1       | .0       | .0       | .0       | .0       | .0       | 13    | .0       | .3        |
| -14/-16            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| TOTAL              | 3        | 64       | 780      | 2749     | 1066     | 161      | 41       | 3        | 2        | 4869  | 43       | 4826      |
| PCT                | .1       | 1.3      | 16.0     | 56.5     | 21.9     | 3.3      | .8       | .1       | *        | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 1.7  | .2    | .0    | .0    | .0  | 2.3  | .2  | .7   | .1    | .0    | .0    | .0  | 1.0  |
| 1-2     | .3  | 7.1  | 3.8   | .0    | .0    | .0  | 11.2 | .2  | 2.5  | 2.4   | .0    | .0    | .0  | 5.1  |
| 3-4     | .0  | 3.4  | 9.4   | .6    | .0    | .0  | 13.4 | .0  | 1.3  | 5.8   | .6    | .0    | .0  | 7.7  |
| 5-6     | .0  | 1.1  | 7.4   | 1.1   | .0    | .0  | 9.7  | .0  | .4   | 5.7   | 1.0   | .0    | .0  | 7.2  |
| 7       | .0  | .2   | 3.0   | 1.4   | *     | .0  | 4.7  | .0  | *    | 2.5   | .9    | *     | .0  | 3.4  |
| 8-9     | .0  | .0   | .6    | .6    | *     | .0  | 1.3  | .0  | *    | .9    | .7    | .0    | .0  | 1.7  |
| 10-11   | .0  | .0   | .3    | .3    | .0    | .0  | .6   | .0  | .0   | .2    | .4    | .0    | .0  | .6   |
| 12      | .0  | .0   | .1    | .2    | .0    | .0  | .3   | .0  | .0   | .2    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .2    | .1    | .0  | .3   | .0  | .0   | *     | .1    | *     | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 13.5 | 25.0  | 4.5   | .1    | .0  | 43.8 | .3  | 5.0  | 17.7  | 3.9   | .1    | .0  | 27.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 1-2     | *   | .2   | .1    | .0    | .0    | .0  | .2  | .0  | *    | *     | .0    | .0    | .0  | *   |
| 3-4     | .0  | .1   | *     | .0    | .0    | .0  | .1  | .0  | *    | *     | .0    | .0    | .0  | *   |
| 5-6     | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | .3   | .4    | .1    | .0    | .0  | .8  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |



PERIOD: (OVER-ALL) 1963-1973

APRIL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .1  | .2   | .0    | .0    | .0    | .0  | .4  |           |
| 1-2     | *   | .4   | .1    | .0    | .0    | .0  | .5  | .1  | 1.1  | .2    | .0    | .0    | .0  | 1.4 |           |
| 3-4     | .0  | .2   | .1    | .0    | .0    | .0  | .2  | .0  | .5   | .9    | .1    | .0    | .0  | 1.4 |           |
| 5-6     | .0  | *    | .3    | .1    | .0    | .0  | .4  | .0  | *    | .2    | *     | .0    | .0  | .3  |           |
| 7       | .0  | *    | .1    | *     | .0    | .0  | .1  | .0  | *    | *     | *     | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | .8   | .5    | .2    | .0    | .0  | 1.5 | .2  | 1.9  | 1.5   | .1    | .0    | .0  | 3.7 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .4  | 1.0  | .1    | .0    | .0    | .0  | 1.5 | .5  | .8   | *     | .0    | .0    | .0  | 1.3  |           |
| 1-2     | .1  | 2.0  | .3    | .0    | .0    | .0  | 2.5 | .1  | 3.3  | .8    | .0    | .0    | .0  | 4.3  |           |
| 3-4     | .0  | .7   | .8    | .1    | .0    | .0  | 1.6 | .0  | 1.7  | 2.1   | .1    | .0    | .0  | 3.9  |           |
| 5-6     | .0  | .1   | .7    | .2    | *     | .0  | 1.0 | .0  | .1   | 1.5   | .7    | *     | .0  | 2.3  |           |
| 7       | .0  | .1   | .1    | .1    | .0    | .0  | .2  | .0  | *    | .6    | .2    | .0    | .0  | .8   |           |
| 8-9     | .0  | *    | *     | .2    | .0    | .0  | .2  | .0  | .0   | .3    | .2    | .0    | .0  | .5   |           |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .2    | .2    | .0    | .0  | .4   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .1    | .0    | .0  | .1   |           |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .5  | 3.9  | 2.0   | .7    | *     | .0  | 7.1 | .6  | 5.9  | 5.5   | 1.7   | *     | .0  | 13.7 | 97.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.0 | 4.9  | .5    | .0    | .0    | .0  | 9.4   |         |
| 1-2     | .9  | 16.6 | 7.7   | .0    | .0    | .0  | 25.2  |         |
| 3-4     | .1  | 7.8  | 18.9  | 1.6   | .0    | .0  | 28.3  |         |
| 5-6     | .0  | 1.7  | 16.0  | 3.1   | *     | .0  | 20.9  |         |
| 7       | .0  | .4   | 6.2   | 2.6   | .1    | .0  | 9.2   |         |
| 8-9     | .0  | .1   | 2.0   | 1.8   | *     | .0  | 4.0   |         |
| 10-11   | .0  | .0   | .7    | 1.0   | .0    | .0  | 1.6   |         |
| 12      | .0  | .0   | .1    | .4    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | *     | .5    | .1    | .0  | .6    |         |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.0 | 31.5 | 52.2  | 11.1  | .2    | .0  | 100.0 | 2860    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 1.0 | 5.4 | 8.2  | 6.3  | 2.3  | 1.1  | .7    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 921   | 4        |
| 5-7          | .1  | .6  | 4.3  | 7.5  | 5.3  | 3.2  | 2.0   | .5  | .3    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 866   | 6        |
| 8-9          | .0  | .5  | 2.1  | 3.8  | 4.3  | 3.1  | 2.1   | .8  | .7    | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 648   | 7        |
| 10-11        | .0  | .4  | 1.1  | 1.5  | 1.6  | 1.6  | .8    | .5  | .3    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 284   | 7        |
| 12-13        | .0  | .0  | .5   | .7   | .7   | .7   | .4    | .3  | .3    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 137   | 8        |
| >13          | .0  | .0  | .0   | .3   | .3   | .3   | .1    | .1  | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 54    | 9        |
| INDET        | 1.8 | 2.7 | 4.3  | 3.6  | 4.0  | 2.0  | .8    | .3  | .5    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 731   | 5        |
| TOTAL        | 103 | 353 | 746  | 865  | 676  | 439  | 254   | 95  | 88    | 15    | 4     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3641  | 6        |
| PCT          | 2.8 | 9.7 | 20.5 | 23.8 | 18.6 | 12.1 | 7.0   | 2.6 | 2.4   | .4    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1853-1973

MAY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .3                 | .3        | .5   | .0        | .0   | .0              | .0   | 1.0                     | .5             | .0        | 1.0         | .0                  | 1.3        | .0              | 96.2       |
| NE       | .1                 | .1        | .3   | .0        | .0   | .0              | .0   | .5                      | .3             | .1        | 1.2         | .1                  | 1.7        | .1              | 96.0       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | 1.2            | .0        | 2.6         | .9                  | 4.0        | .0              | 91.3       |
| SE       | 6.9                | 2.9       | 2.9  | .0        | .0   | .0              | .0   | 12.6                    | .0             | .0        | .0          | .6                  | 2.3        | .0              | 84.5       |
| S        | .0                 | .6        | 1.2  | .0        | .0   | .0              | .0   | 1.8                     | 1.6            | .6        | 2.5         | .0                  | .8         | .0              | 92.6       |
| SW       | 1.1                | 2.3       | 1.8  | .0        | .0   | .0              | .0   | 5.2                     | 3.6            | .1        | 2.8         | .0                  | .4         | .0              | 87.8       |
| W        | 1.5                | 2.4       | .4   | .0        | .0   | .0              | .0   | 4.3                     | 3.3            | .3        | 2.4         | .0                  | .2         | .0              | 89.6       |
| NW       | .1                 | .8        | .2   | .0        | .0   | .0              | .0   | 1.1                     | 1.6            | .4        | 1.5         | .2                  | .3         | .0              | 95.0       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | 1.3       | .0   | .0        | .0   | .0              | .0   | 1.3                     | .0             | .0        | 5.3         | 1.3                 | 5.3        | .0              | 86.8       |
| TOT PCT  | .4                 | .6        | .5   | .0        | .0   | .0              | .0   | 1.4                     | .9             | .1        | 1.4         | .1                  | 1.2        | *               | 94.7       |
| TOT OBS: | 5485               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .2                 | .5        | .4   | .0        | .0   | .0              | .0   | 1.2                     | .8             | .6        | 1.5         | .0                  | 1.1        | .1              | 94.8       |
| 06009      | .8                 | 1.0       | 1.1  | .0        | .0   | .0              | .0   | 2.8                     | 1.4            | .1        | 1.5         | .1                  | 1.0        | .0              | 93.0       |
| 12015      | .2                 | .6        | .4   | .0        | .0   | .0              | .0   | 1.3                     | 1.0            | .0        | .9          | .1                  | 1.4        | .1              | 95.2       |
| 18021      | .2                 | .3        | .0   | .0        | .0   | .0              | .0   | .5                      | .5             | .0        | 1.8         | .0                  | 1.5        | .0              | 95.7       |
| TOT PCT    | .4                 | .6        | .5   | .0        | .0   | .0              | .0   | 1.4                     | .9             | .2        | 1.4         | .1                  | 1.2        | *               | 94.7       |
| TOT OBS:   | 5605               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.5                | 14.8 | 19.7  | 3.9   | .2    | .0  |       | 40.1      | 13.0     |          | 41.0       | 41.7  | 40.1  | 38.6  | 39.2  | 45.0  | 41.8  | 36.7  |
| NE       | .7                 | 8.8  | 15.6  | 4.1   | .2    | .0  |       | 29.3      | 14.3     |          | 29.5       | 32.1  | 29.2  | 32.4  | 29.6  | 27.1  | 27.3  | 29.9  |
| E        | .2                 | .9   | .4    | *     | *     | .0  |       | 1.5       | 9.0      |          | 1.5        | 1.3   | 1.3   | 1.3   | 1.7   | 2.4   | 1.5   | 1.3   |
| SE       | .2                 | .4   | .2    | *     | .0    | .0  |       | .8        | 7.3      |          | .9         | 1.0   | .6    | .8    | 1.0   | .2    | .6    | .7    |
| S        | .2                 | 1.0  | .4    | *     | .0    | .0  |       | 1.6       | 8.8      |          | 1.5        | 1.3   | 1.6   | 1.5   | 1.9   | 2.3   | 1.9   | 1.0   |
| SW       | .2                 | 2.4  | 1.3   | .1    | *     | .0  |       | 4.0       | 9.9      |          | 3.3        | 3.3   | 4.6   | 4.0   | 4.5   | 2.3   | 3.9   | 4.2   |
| W        | .6                 | 5.0  | 2.5   | .2    | *     | .0  |       | 8.3       | 9.6      |          | 8.0        | 9.8   | 8.1   | 7.5   | 8.0   | 10.6  | 8.7   | 8.9   |
| NW       | 1.0                | 7.5  | 3.7   | .5    | *     | .0  |       | 12.7      | 9.6      |          | 12.0       | 7.9   | 12.7  | 12.2  | 12.3  | 8.9   | 12.9  | 15.9  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.7                |      |       |       |       |     |       | 1.7       | .0       |          | 2.1        | 1.5   | 1.9   | 1.8   | 1.9   | 1.4   | 1.4   | 1.3   |
| TOT OBS  | 653                | 4230 | 4548  | 928   | 38    | 0   | 10397 |           | 12.2     |          | 2017       | 130   | 1992  | 960   | 2127  | 144   | 2067  | 960   |
| TOT PCT  | 6.3                | 40.7 | 43.7  | 8.9   | .4    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 03    | 06    | 12    | 18    |
| N        | 5.9                | 22.6 | 10.6  | 1.0   | *   |           |          | 40.1     | 13.0       | 41.1  | 39.6  | 39.6  | 40.2  |
| NE       | 3.3                | 15.3 | 9.3   | 1.2   | *   |           |          | 29.3     | 14.3       | 29.7  | 30.2  | 29.5  | 28.1  |
| E        | .6                 | .8   | .1    | *     | .0  |           |          | 1.5      | 9.0        | 1.5   | 1.3   | 1.8   | 1.5   |
| SE       | .4                 | .3   | *     | .0    | .0  |           |          | .8       | 7.3        | .9    | .6    | .9    | .6    |
| S        | .6                 | .9   | .1    | .0    | .0  |           |          | 1.6      | 8.8        | 1.5   | 1.5   | 1.9   | 1.7   |
| SW       | 1.3                | 2.3  | .5    | *     | *   |           |          | 4.0      | 9.9        | 3.3   | 4.4   | 4.3   | 4.0   |
| W        | 2.7                | 4.6  | .9    | .1    | *   |           |          | 8.3      | 9.6        | 8.2   | 7.9   | 8.1   | 8.8   |
| NW       | 4.2                | 7.0  | 1.3   | .1    | *   |           |          | 12.7     | 9.6        | 11.8  | 12.6  | 12.1  | 13.8  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           |          | .0       | .0         | .0    | .0    | .0    | .0    |
| CALM     | 1.7                |      |       |       | .0  |           |          | 1.7      | .0         | 2.0   | 1.8   | 1.8   | 1.4   |
| TOT OBS  | 2174               | 5587 | 2375  | 252   | 9   | 10397     |          |          | 12.2       | 2147  | 2492  | 2271  | 3007  |
| TOT PCT  | 20.9               | 53.7 | 22.8  | 2.4   | .1  |           |          | 100.0    |            | 100.0 | 100.0 | 100.0 | 100.0 |

AD-A031 778

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
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3 OF 7  
ADA031778





PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MAY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

| PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT) |      |     |      |                    |       |       |     |      |          |           |
|--|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
| HOUR   | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|  |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000   | 2.0  | 4.1 | 40.9 | 44.1               | 8.5   | .3    | .0  | 12.1 | 100.0    | 2147      |
| 0600   | 1.8  | 4.8 | 42.4 | 42.3               | 8.2   | .4    | .0  | 11.8 | 100.0    | 2552      |
| 1200   | 1.8  | 4.6 | 39.1 | 43.9               | 10.2  | .3    | .0  | 12.4 | 100.0    | 2271      |
| 1800   | 1.4  | 4.5 | 40.0 | 44.7               | 9.0   | .4    | .0  | 12.3 | 100.0    | 3027      |
| TOT  | 181  | 472 | 4230 | 4548               | 928   | 38    | 0   | 12.2 |          | 10397     |
| PCT  | 1.7  | 4.5 | 40.7 | 43.7               | 8.9   | .4    | .0  |      | 100.0    |           |

TABLE 5

| PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)<br>BY WIND DIRECTION |      |      |      |            |              |                        |
|---|------|------|------|------------|--------------|------------------------|
| WIND DIR  | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
| N   | 11.4 | 9.4  | 15.2 | 8.0        |              | 4.6                    |
| NE  | 8.7  | 5.1  | 9.5  | 3.8        |              | 4.2                    |
| E   | .6   | .2   | .4   | .2         |              | 3.8                    |
| SE  | .2   | .1   | .2   | .2         |              | 4.5                    |
| S   | .7   | .5   | .5   | .4         |              | 4.7                    |
| SW  | 1.2  | 1.0  | 1.2  | .5         |              | 4.2                    |
| W   | 2.2  | 2.3  | 2.1  | 1.0        |              | 4.2                    |
| NW  | 3.3  | 3.1  | 3.6  | 1.5        |              | 4.1                    |
| VAR   | .0   | .0   | .0   | .0         |              | .0                     |
| CALM  | .5   | .3   | .4   | .3         |              | 4.0                    |
| TOT OBS   | 1305 | 998  | 1502 | 723        | 4528         | 4.3                    |
| TOT PCT   | 28.8 | 22.0 | 33.2 | 16.0       | 100.0        |                        |

TABLE 6

| PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)<br>AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION |     |     |     |     |      |      |      |      |      |       |                    |              |  |
|--|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|--|
|  | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |  |
|  | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |  |
| N  | .1  | .6  | 2.4 | 7.4 | 4.8  | 2.8  | .5   | .2   | .4   | 24.9  |                    |              |  |
| NE   | .0  | .2  | 1.3 | 4.0 | 3.3  | 1.3  | .3   | .1   | .3   | 16.3  |                    |              |  |
| E  | .0  | .0  | .1  | .1  | .1   | .1   | .1   | .0   | .0   | 1.0   |                    |              |  |
| SE   | .0  | .0  | .1  | .1  | .1   | .1   | .1   | .0   | .0   | 1.4   |                    |              |  |
| S  | .0  | .0  | .1  | .2  | .2   | .1   | .1   | .0   | .0   | 1.6   |                    |              |  |
| SW   | .0  | .0  | .2  | .3  | .4   | .2   | .1   | .0   | .0   | 2.7   |                    |              |  |
| W  | .0  | .1  | .3  | .7  | .7   | .3   | .0   | .0   | .1   | 5.4   |                    |              |  |
| NW   | .0  | .0  | .6  | 1.4 | .7   | .7   | .1   | .0   | .1   | 7.8   |                    |              |  |
| VAR  | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    |                    |              |  |
| CALM   | .0  | .0  | .1  | .1  | .2   | .1   | .0   | .1   | .0   | .9    |                    |              |  |
| TOT OBS  | 7   | 5   | 40  | 235 | 649  | 472  | 253  | 46   | 23   | 41    | 2757               | 4528         |  |
| TOT PCT  | .2  | .1  | .9  | 5.2 | 14.3 | 10.4 | 5.6  | 1.0  | .5   | .9    | 60.9               | 100.0        |  |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.1         | 1.5        | 1.5        | 1.5        | 1.5          | 1.5          | 1.5           | 1.5        |
| = OR >5000        | 2.0         | 2.5        | 2.5        | 2.5        | 2.5          | 2.5          | 2.5           | 2.5        |
| = OR >3500        | 6.7         | 7.9        | 8.1        | 8.1        | 8.1          | 8.1          | 8.1           | 8.1        |
| = OR >2000        | 15.1        | 18.2       | 18.5       | 18.5       | 18.5         | 18.5         | 18.5          | 18.5       |
| = OR >1000        | 27.0        | 32.3       | 32.7       | 32.8       | 32.8         | 32.8         | 32.8          | 32.8       |
| = OR >600         | 31.1        | 37.3       | 37.8       | 37.9       | 37.9         | 37.9         | 37.9          | 37.9       |
| = OR >300         | 31.7        | 38.1       | 38.7       | 38.8       | 38.8         | 38.8         | 38.8          | 38.8       |
| = OR >150         | 31.7        | 38.2       | 38.8       | 38.9       | 38.9         | 38.9         | 38.9          | 38.9       |
| = OR >0           | 31.7        | 38.3       | 38.9       | 39.0       | 39.0         | 39.0         | 39.0          | 39.0       |
| TOTAL             | 1458        | 1760       | 1789       | 1791       | 1791         | 1791         | 1794          | 1794       |

TOTAL NUMBER OF OBS: 4595

PCT FREQ NH <5/8: 61.0

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7    | 8    | OBS | TOTAL<br>OBS |
|------|------|------|------|------|-----|-----|------|------|-----|--------------|
| 13.7 | 10.8 | 13.5 | 12.2 | 10.1 | 6.8 | 8.6 | 10.2 | 13.9 | .1  | 4822         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MAY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | *    | .0  | .0 | *   | *   | .0  | .0   | .0  | .0   | *     | .1           |
|              | TOT %  | .0   | *    | .0  | .0 | *   | *   | .0  | .0   | .0  | .0   | *     | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | *    | *    | .0  | .0 | .0  | *   | .1  | .1   | .0  | .0   | .2    | .2           |
|              | TOT %  | *    | *    | .0  | .0 | .0  | *   | .1  | .1   | .0  | .0   | .2    | .2           |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0  | *   | *   | .0   | .0  | .0   | *     | *            |
|              | NO PCP | .1   | .1   | .0  | .0 | .0  | *   | *   | *    | .0  | *    | .2    | .2           |
|              | TOT %  | .1   | .1   | .0  | .0 | .0  | *   | *   | *    | .0  | *    | .2    | .2           |
| 2<5          | PCP    | *    | .0   | .0  | *  | .0  | .0  | *   | .0   | .0  | .0   | .1    | .1           |
|              | NO PCP | .5   | .5   | .1  | .0 | *   | .1  | *   | .1   | .0  | .1   | 1.4   | 1.4          |
|              | TOT %  | .5   | .5   | .1  | *  | *   | .1  | *   | .1   | .0  | .1   | 1.4   | 1.4          |
| 5<10         | PCP    | .2   | .1   | .0  | *  | *   | .1  | .2  | .1   | .0  | *    | .7    | .7           |
|              | NO PCP | 7.7  | 5.3  | .3  | .2 | .6  | 1.0 | 1.6 | 1.9  | .0  | .3   | 18.9  | 18.9         |
|              | TOT %  | 8.0  | 5.4  | .3  | .2 | .6  | 1.2 | 1.7 | 2.0  | .0  | .3   | 19.7  | 19.7         |
| 10+          | PCP    | .2   | .1   | .0  | .1 | *   | .1  | *   | *    | .0  | .0   | .6    | .6           |
|              | NO PCP | 34.3 | 20.7 | 1.2 | .5 | 1.7 | 3.0 | 6.1 | 9.3  | .0  | .9   | 77.8  | 77.8         |
|              | TOT %  | 34.5 | 20.8 | 1.2 | .6 | 1.7 | 3.1 | 6.3 | 9.3  | .0  | .9   | 78.4  | 78.4         |
| TOT OBS      |        |      |      |     |    |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |     |    |     |     |     |      |     |      |       |              |
|              |        | 43.1 | 26.8 | 1.6 | .8 | 2.3 | 4.4 | 8.1 | 11.6 | .0  | 1.4  | 100.0 | 5478         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | *    | *     | *            |
|              | 4-10       | .0   | *    | .0  | .0 | *   | *   | .0  | .0   | .0  | .0   | *     | *            |
|              | 11-21      | .0   | *    | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     | *            |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | *    | .0  | .0 | *   | *   | .0  | .0   | .0  | *    | .1    | .1           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | *    | .0  | .0 | .0  | *   | *   | .1   | .0  | .0   | .1    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | *   | .0   | .0  | .0   | *     | *            |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | *    | *    | .0  | .0 | .0  | *   | *   | .1   | .0  | .0   | .1    | .1           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | *    | *     | *            |
|              | 4-10       | *    | *    | .0  | .0 | .0  | *   | *   | *    | .0  | .0   | .1    | .1           |
|              | 11-21      | *    | *    | .0  | .0 | .0  | .0  | .0  | *    | .0  | .0   | .1    | .1           |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | *   | *   | *    | .0  | *    | *     | *            |
|              | TOT %      | .1   | .1   | .0  | .0 | .0  | *   | *   | *    | .0  | *    | .2    | .2           |
| 2<5          | 0-3        | *    | *    | .0  | *  | *   | .0  | .0  | *    | .0  | .1   | .2    | .2           |
|              | 4-10       | .2   | .1   | .1  | *  | *   | *   | .0  | .1   | .0  | .0   | .5    | .5           |
|              | 11-21      | .2   | .2   | *   | .0 | *   | *   | *   | .1   | .0  | .0   | .5    | .5           |
|              | 22+        | .2   | .1   | .0  | .0 | .0  | *   | *   | *    | .0  | .0   | .3    | .3           |
|              | TOT %      | .5   | .5   | .1  | *  | *   | *   | *   | .2   | .0  | .1   | 1.6   | 1.6          |
| 5<10         | 0-3        | .1   | .1   | .1  | *  | .1  | .1  | .1  | .1   | .0  | .3   | .9    | .9           |
|              | 4-10       | 2.5  | 1.2  | .2  | .1 | .2  | .5  | 1.0 | 1.0  | .0  | .0   | 6.7   | 6.7          |
|              | 11-21      | 3.5  | 2.5  | .1  | .1 | .1  | .3  | .5  | .7   | .0  | .0   | 7.7   | 7.7          |
|              | 22+        | 1.3  | 1.1  | .0  | .0 | *   | *   | .1  | .1   | .0  | .0   | 2.6   | 2.6          |
|              | TOT %      | 7.4  | 4.9  | .3  | .2 | .4  | .9  | 1.5 | 1.9  | .0  | .3   | 17.9  | 17.9         |
| 10+          | 0-3        | 1.1  | .5   | .1  | .1 | .1  | .2  | .4  | .5   | .0  | 1.1  | 4.2   | 4.2          |
|              | 4-10       | 12.5 | 6.8  | .7  | .3 | .9  | 1.7 | 3.7 | 6.2  | .0  | .0   | 32.8  | 32.8         |
|              | 11-21      | 17.4 | 12.7 | .3  | .2 | .4  | 1.0 | 2.0 | 2.7  | .0  | .0   | 36.7  | 36.7         |
|              | 22+        | 2.9  | 3.0  | *   | .0 | *   | .1  | .1  | .3   | .0  | .0   | 6.4   | 6.4          |
|              | TOT %      | 33.9 | 23.0 | 1.2 | .6 | 1.4 | 3.0 | 6.2 | 9.6  | .0  | 1.1  | 80.1  | 80.1         |
| TOT OBS      |            |      |      |     |    |     |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |     |    |     |     |     |      |     |      |       |              |
|              |            | 41.9 | 28.5 | 1.6 | .8 | 1.9 | 4.0 | 7.9 | 11.8 | .0  | 1.6  | 100.0 | 7760         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MAY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .1         | .1         | .8         | 4.3        | 13.8         | 8.5          | 3.8          | .9           | .6           | .9    | 33.9  | 66.1               | 1066         |
| 06009         | .2         | .2         | 1.4        | 6.9        | 18.6         | 13.0         | 7.6          | 1.6          | .6           | 1.2   | 51.1  | 48.9               | 1164         |
| 12015         | .1         | .1         | .8         | 4.8        | 12.3         | 10.7         | 5.2          | 1.2          | .6           | 1.0   | 36.7  | 63.3               | 1255         |
| 18021         | .2         | .1         | .4         | 4.2        | 11.5         | 8.4          | 5.3          | .3           | .2           | .7    | 31.4  | 68.6               | 1225         |
| TOT           | 7          | 5          | 40         | 238        | 658          | 479          | 258          | 48           | 24           | 44    | 1801  | 2909               | 4710         |
| PCT           | .1         | .1         | .8         | 5.1        | 14.0         | 10.2         | 5.5          | 1.0          | .5           | .9    | 38.2  | 61.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .1    | .1  | 1.7 | 17.7 | 80.3 | 1727         |
| 06009         | .1   | .1    | .1  | 1.7 | 21.2 | 76.7 | 2112         |
| 12015         | .1   | .1    | .4  | 1.2 | 15.5 | 82.8 | 1851         |
| 18021         | *    | .2    | .1  | 1.7 | 17.7 | 80.3 | 2191         |
| TOT           | 6    | 11    | 15  | 125 | 1426 | 6298 | 7881         |
| PCT           | .1   | .1    | .2  | 1.6 | 18.1 | 79.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><5000 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .1            | 1.1        | 7.3         | 29.4            | 63.3              | 1022         |
| 06009         | .2            | 1.8        | 10.4        | 42.5            | 47.1              | 1140         |
| 12015         | .1            | 1.0        | 6.5         | 31.1            | 62.4              | 1230         |
| 18021         | .2            | .7         | 6.3         | 26.4            | 67.3              | 1203         |
| TOT           | 7             | 53         | 349         | 1484            | 2762              | 4595         |
| PCT           | .2            | 1.2        | 7.6         | 32.3            | 60.1              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | *    | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | 1            | *           |
| 75/79  | .0   | .0    | .1    | .1    | *     | .1    | *     | *      | 21           | .5          |
| 70/74  | .0   | .0    | *     | .6    | 1.9   | 2.6   | 1.5   | .4     | 310          | 7.0         |
| 65/69  | .0   | .0    | .0    | .7    | 9.1   | 15.5  | 16.1  | 6.7    | 2141         | 48.2        |
| 60/64  | .0   | .0    | *     | .6    | 8.6   | 15.3  | 14.0  | 5.4    | 1949         | 43.9        |
| 55/59  | .0   | .0    | .0    | .0    | .2    | .1    | .2    | *      | 21           | .5          |
| TOTAL  | 1    | 0     | 6     | 89    | 880   | 1496  | 1416  | 556    | 4444         | 100.0       |
| PCT    | *    | .0    | .1    | 2.0   | 19.8  | 33.7  | 31.9  | 12.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM |
|-------|------|------|-----|----|-----|-----|-----|------|-----|------|
| 85/89 | *    | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   |
| 80/84 | *    | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   |
| 75/79 | .2   | .1   | *   | *  | .1  | *   | .0  | *    | .0  | .0   |
| 70/74 | 2.8  | 1.7  | .2  | *  | .3  | .3  | .7  | .7   | .0  | .2   |
| 65/69 | 20.7 | 13.1 | .9  | .5 | 1.1 | 2.4 | 3.9 | 4.9  | .0  | .6   |
| 60/64 | 19.8 | 11.8 | .5  | .2 | .4  | 1.3 | 3.7 | 5.8  | .0  | .4   |
| 55/59 | .2   | .1   | .0  | .0 | .0  | .1  | *   | .1   | .0  | *    |
| TOTAL | 43.7 | 26.7 | 1.6 | .8 | 1.9 | 4.1 | 8.3 | 11.6 | .0  | 1.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 70  | 67  | 64  | 60 | 58 | 50  | 63.7 | 2163         |
| 06009         | 76  | 71  | 68  | 64  | 60 | 58 | 52  | 63.8 | 2942         |
| 12015         | 87  | 76  | 73  | 67  | 63 | 61 | 51  | 67.2 | 2220         |
| 18021         | 85  | 75  | 72  | 66  | 62 | 60 | 51  | 66.1 | 2967         |
| TOT           | 87  | 74  | 71  | 65  | 61 | 59 | 50  | 65.2 | 10292        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .9    | 13.9  | 31.6  | 37.0  | 16.7   | 80   | 1049         |
| 06009         | .0   | 1.0   | 15.7  | 32.4  | 33.9  | 17.0   | 79   | 1132         |
| 12015         | .0   | 4.5   | 28.5  | 34.5  | 23.9  | 6.6    | 75   | 1161         |
| 18021         | .1   | 2.0   | 20.2  | 35.7  | 30.8  | 11.2   | 77   | 1188         |
| TOT           | 1    | 96    | 895   | 1922  | 1439  | 577    | 78   | 4530         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | *        | *        | .1       | .1       | .2       | .0       | .0       | 23    | .0       | .5        |
| 9/10               | .0       | .0       | .0       | *        | *        | .1       | .2       | *        | .0       | .0       | 21    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | *        | .2       | .5       | .5       | .0       | *        | .0       | 60    | *        | 1.2       |
| 6                  | .0       | .0       | .0       | *        | .2       | .7       | .3       | .0       | .0       | .0       | 58    | *        | 1.1       |
| 5                  | .0       | .0       | .0       | .1       | .6       | 1.4      | .4       | .0       | .0       | .0       | 130   | *        | 2.5       |
| 4                  | .0       | .0       | .0       | .2       | 1.5      | 1.6      | .2       | .0       | .0       | .0       | 173   | *        | 3.4       |
| 3                  | .0       | .0       | *        | .3       | 2.7      | 1.5      | .1       | .0       | .0       | .0       | 232   | .1       | 4.5       |
| 2                  | .0       | .0       | *        | .9       | 5.5      | 1.2      | *        | .0       | .0       | .0       | 385   | .1       | 7.5       |
| 1                  | .0       | .0       | *        | 2.2      | 8.5      | 1.0      | *        | .0       | .0       | .0       | 594   | .2       | 11.5      |
| 0                  | .0       | .0       | .2       | 5.8      | 10.4     | .7       | .1       | .0       | .0       | .0       | 868   | .4       | 16.8      |
| -1                 | .0       | .0       | .2       | 11.1     | 7.9      | .3       | .1       | .0       | .0       | .0       | 984   | .3       | 19.2      |
| -2                 | .0       | .0       | .4       | 10.0     | 3.4      | .1       | .0       | .0       | .0       | .0       | 693   | .2       | 13.6      |
| -3                 | .0       | *        | .5       | 5.0      | 1.6      | .1       | .0       | .0       | .0       | .0       | 365   | .1       | 7.2       |
| -4                 | .0       | .0       | .6       | 3.1      | 1.8      | .1       | *        | .0       | .0       | .0       | 229   | *        | 4.5       |
| -5                 | .0       | .0       | .3       | 1.9      | .4       | *        | .0       | .0       | .0       | .0       | 134   | .0       | 2.7       |
| -6                 | .0       | .0       | .2       | .4       | .1       | *        | .0       | .0       | .0       | .0       | 38    | .0       | .8        |
| -7/-8              | .0       | *        | .1       | .3       | *        | .0       | *        | .0       | .0       | .0       | 28    | .0       | .6        |
| -9/-10             | *        | .1       | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | 10    | .0       | .2        |
| -11/-13            | .0       | .1       | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 5     | .0       | .1        |
| -14/-16            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| -17/-19            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 4        | 10       | 133      | 2092     | 43.0     | 9.3      | 2.1      | 12       | *        | 1        | 5039  | 81       | 4958      |
| PCT                | .1       | .2       | 2.6      | 41.5     | 43.0     | 9.3      | 2.1      | 12       | *        | 1        | 100.0 | 1.6      | 98.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |
| <1      | .4  | 1.9  | .2    | .0    | .0    | .0  | 2.6  | .3  | .6   | *     | .0    | .0    | .0  | .0  | 1.0  |
| 1-2     | .4  | 6.2  | 3.9   | .0    | .0    | .0  | 10.6 | .1  | 3.9  | 2.2   | .0    | .0    | .0  | .0  | 6.2  |
| 3-4     | .0  | 3.1  | 9.3   | .5    | .0    | .0  | 12.9 | .0  | 1.7  | 5.7   | .7    | .0    | .0  | .0  | 8.1  |
| 5-6     | .0  | 1.0  | 6.2   | 1.1   | *     | .0  | 8.2  | .0  | .3   | 5.3   | 1.1   | *     | .0  | .0  | 6.7  |
| 7       | .0  | .1   | 3.0   | 1.4   | *     | .0  | 4.6  | .0  | .1   | 2.0   | 1.6   | *     | .0  | .0  | 3.7  |
| 8-9     | .0  | .0   | 1.2   | 1.1   | .0    | .0  | 2.2  | .1  | .0   | 1.0   | 1.4   | .1    | .0  | .0  | 2.5  |
| 10-11   | .0  | .0   | .3    | .5    | *     | .0  | .8   | .0  | .0   | .3    | .7    | .0    | .0  | .0  | .9   |
| 12      | .0  | .0   | .1    | .3    | .1    | .0  | .5   | .0  | .0   | *     | .2    | *     | .0  | .0  | .2   |
| 13-16   | .0  | .0   | .3    | .3    | *     | .0  | .4   | .0  | .0   | .1    | .3    | .0    | .0  | .0  | .3   |
| 17-19   | .0  | *    | .1    | .0    | *     | .0  | .1   | .0  | .0   | *     | *     | *     | .0  | .0  | .1   |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |
| TOT PCT | .8  | 12.4 | 24.3  | 5.2   | .3    | .0  | 43.0 | .5  | 6.6  | 16.5  | 5.9   | .1    | .0  | .0  | 29.6 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .0  | .1   | *     | .0    | .0    | .0  | .0  | .1  |
| 1-2     | *   | .6   | .2    | .0    | .0    | .0  | .8  | .0  | .3   | .1    | .0    | .0    | .0  | .0  | .4  |
| 3-4     | .0  | .2   | .2    | *     | .0    | .0  | .4  | .0  | .0   | .1    | .0    | .0    | .0  | .0  | .1  |
| 5-6     | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | *    | .1    | .0    | .0    | .0  | .0  | .2  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| TOT PCT | *   | 1.1  | .4    | .1    | .0    | .0  | 1.6 | *   | .4   | .3    | .0    | .0    | .0  | .0  | .8  |

PERIOD: (OVER-ALL) 1963-1973

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31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| S       |     |      |       |       |       |     |     | SW  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3  | .1  | .3   | .0    | .0    | .0    | .0  | .5  |  |
| 1-2     | .1  | .8   | .3    | .0    | .0    | .0  | 1.2 | .1  | .9   | .3    | .0    | .0    | .0  | 1.3 |  |
| 3-4     | .0  | .2   | .2    | .0    | .0    | .0  | .4  | .0  | .5   | .5    | .0    | .0    | .0  | 1.0 |  |
| 5-6     | .0  | .3   | .3    | .0    | .0    | .0  | .4  | .0  | .5   | .5    | .0    | .0    | .0  | .6  |  |
| 7       | .0  | .3   | .3    | .0    | .0    | .0  | .1  | .0  | .3   | .1    | .1    | .0    | .0  | .2  |  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .3    | .3    | .0    | .0  | .1  |  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .2  | 1.2  | .8    | .0    | .0    | .0  | 2.3 | .2  | 1.8  | 1.6   | .1    | .0    | .0  | 3.7 |  |

| W       |     |      |       |       |       |     |     | NW  |      |       |       |       |     |      |      | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|------|-----------|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |      |           |
| <1      | .3  | .5   | .0    | .0    | .0    | .0  | .9  | .2  | 1.0  | .0    | .0    | .0    | .0  | 1.2  |      |           |
| 1-2     | .2  | 2.4  | .6    | .0    | .0    | .0  | 3.2 | .2  | 3.8  | .7    | .0    | .0    | .0  | 4.7  |      |           |
| 3-4     | .0  | .9   | .8    | .0    | .0    | .0  | 1.7 | .0  | 1.2  | 1.5   | .0    | .0    | .0  | 2.8  |      |           |
| 5-6     | .0  | .1   | 1.1   | .0    | .0    | .0  | 1.3 | .0  | .1   | .7    | .1    | .0    | .0  | .9   |      |           |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .3  | .0  | .0   | .2    | .0    | .0    | .0  | .2   |      |           |
| 8-9     | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0   | .1    | .1    | .0    | .0  | .1   |      |           |
| 10-11   | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1   |      |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |      |           |
| TOT PCT | .5  | 4.0  | 3.1   | .1    | .0    | .0  | 7.7 | .5  | 6.0  | 3.2   | .2    | .0    | .0  | 10.0 | 98.7 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.4 | 5.0  | .3    | .0    | .0    | .0  | 8.8   |         |
| 1-2     | 1.2 | 18.9 | 8.2   | .0    | .0    | .0  | 28.3  |         |
| 3-4     | .1  | 7.7  | 18.1  | 1.2   | .0    | .0  | 27.1  |         |
| 5-6     | .0  | 1.5  | 14.2  | 2.4   | .1    | .0  | 18.2  |         |
| 7       | .0  | .2   | 5.5   | 3.2   | .0    | .0  | 8.9   |         |
| 8-9     | .1  | .0   | 2.5   | 2.5   | .1    | .0  | 5.1   |         |
| 10-11   | .0  | .0   | .7    | 1.2   | .0    | .0  | 1.9   |         |
| 12      | .0  | .0   | .1    | .5    | .1    | .0  | .7    |         |
| 13-16   | .0  | .0   | .1    | .6    | .1    | .0  | .8    |         |
| 17-19   | .0  | .0   | .1    | .0    | .0    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.8 | 33.4 | 49.8  | 11.6  | .4    | .0  | 100.0 | 2917    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.4 | 7.9  | 10.1 | 5.8  | 2.6  | 1.3  | .4    | .1  | .5    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1073  | 4        |
| 6-7          | .0  | 1.4  | 4.2  | 7.4  | 5.5  | 2.3  | 1.9   | .7  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 873   | 6        |
| 8-9          | .0  | .4   | 1.6  | 3.7  | 3.7  | 2.8  | 1.3   | .6  | .5    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 527   | 7        |
| 10-11        | .0  | .5   | .7   | .8   | 2.0  | 1.4  | 1.1   | .4  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 266   | 7        |
| 12-13        | .0  | .0   | .7   | .9   | .6   | .6   | .4    | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 136   | 7        |
| >13          | .0  | .0   | .0   | .2   | .2   | .2   | .1    | .2  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 39    | 10       |
| INDET        | 1.7 | 3.9  | 4.6  | 3.1  | 2.9  | 1.6  | .9    | .3  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 696   | 5        |
| TOTAL        | 113 | 507  | 784  | 790  | 630  | 368  | 222   | 98  | 78    | 13    | 4     | 2     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 3610  | 5        |
| PCT          | 3.1 | 14.0 | 21.7 | 21.9 | 17.5 | 10.2 | 6.1   | 2.7 | 2.2   | .4    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1861-1973

JUNE

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |             |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|-------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEAT |  |
| N                  | .1   | .4        | .5   | .0        | .0   | .0              | .0   | 1.0             | .6             | .2                      | 3.6         | .1                  | 2.1        | *               | 92.4        |  |
| NE                 | .5   | .4        | .6   | .0        | .0   | .0              | .0   | 1.5             | .7             | .1                      | 2.3         | *                   | 2.1        | *               | 93.2        |  |
| E                  | 2.4  | 1.8       | .0   | .0        | .0   | .0              | .0   | 4.1             | 4.7            | .0                      | 2.4         | .0                  | 1.8        | .0              | 87.1        |  |
| SE                 | 9.1  | 1.3       | 1.3  | .0        | .0   | .0              | .0   | 11.7            | 5.2            | 1.3                     | 5.2         | .0                  | 5.2        | .0              | 71.4        |  |
| S                  | 4.6  | 4.0       | .9   | .0        | .0   | .0              | .0   | 9.5             | 3.4            | .9                      | 1.2         | .0                  | .0         | .0              | 85.0        |  |
| SW                 | .4   | 2.4       | 1.2  | .0        | .0   | .0              | .0   | 4.0             | 2.6            | .0                      | 1.2         | .0                  | 1.2        | .0              | 91.1        |  |
| W                  | .6   | .9        | .5   | .0        | .0   | .0              | .0   | 1.9             | 4.3            | .2                      | .3          | .0                  | 1.8        | .0              | 91.4        |  |
| NW                 | .2   | .6        | 1.3  | .0        | .0   | .0              | .0   | 2.0             | 1.8            | .1                      | 1.5         | .0                  | 3.9        | *               | 90.7        |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0          |  |
| CALM               | 1.0  | .0        | 1.0  | .0        | .0   | .0              | .0   | 2.0             | .0             | .0                      | 7.1         | .0                  | 3.1        | .0              | 87.8        |  |
| TOT PCT            | .4   | .5        | .6   | .0        | .0   | .0              | .0   | 1.6             | 1.2            | .1                      | 2.8         | *                   | 2.3        | *               | 91.9        |  |
| TOT OBS:           | 5029 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |             |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                    |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|--------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG MO<br>PCPN | FOG MO<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG<br>WEA |
| 00003         | .2                 | .4           | .5   | .0           | .0   | .0                    | .0   | 1.1                     | 1.0               | .1           | 2.2            | .1                        | 2.0           | .0                 | 93.5             |
| 06009         | .7                 | 1.2          | 1.0  | .0           | .0   | .0                    | .0   | 2.9                     | 1.4               | .5           | 3.3            | .1                        | 1.6           | .0                 | 90.3             |
| 12015         | .3                 | .5           | .6   | .0           | .0   | .0                    | .0   | 1.4                     | 1.4               | .0           | 2.9            | .0                        | 2.5           | .0                 | 91.9             |
| 18021         | .2                 | .3           | .5   | .0           | .0   | .0                    | .0   | .9                      | .8                | .0           | 3.3            | .0                        | 2.9           | .1                 | 92.0             |
| TOT PCT       | .3                 | .6           | .6   | .0           | .0   | .0                    | .0   | 1.6                     | 1.1               | .1           | 2.9            | .0                        | 2.2           | .0                 | 91.9             |
| TOT OBS:      | 5164               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                    |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.5                | 20.7 | 23.8  | 3.2   | .1    | .0  |      | 49.3      | 12.1     | 49.2     | 48.8       | 50.2  | 45.6  | 49.5  | 60.6  | 50.4  | 46.7  |    |
| NE       | .9                 | 8.6  | 14.3  | 2.3   | .0    | .0  |      | 26.2      | 13.2     | 24.7     | 22.9       | 24.6  | 32.1  | 26.7  | 21.6  | 29.0  | 29.0  |    |
| E        | .1                 | .5   | .2    | .0    | .0    | .0  |      | .9        | 8.5      | .7       | 1.6        | 1.0   | .8    | .9    | .0    | .8    | .8    |    |
| SE       | .6                 | .2   | .1    | .0    | .0    | .0  |      | .3        | 8.2      | .3       | .0         | .5    | .4    | .2    | .0    | .2    | .2    |    |
| S        | .1                 | .5   | .4    | .0    | .0    | .0  |      | 1.1       | 10.0     | 1.2      | .0         | 1.3   | .4    | 1.4   | .0    | 1.1   | .4    |    |
| SW       | .3                 | 1.8  | 1.1   | .0    | .0    | .0  |      | 3.2       | 9.2      | 3.5      | 3.5        | 3.0   | 2.9   | 3.9   | 2.5   | 3.0   | 2.7   |    |
| W        | .7                 | 3.8  | 1.3   | .0    | .0    | .0  |      | 5.9       | 7.9      | 6.5      | 8.7        | 5.3   | 6.0   | 5.7   | 7.0   | 5.6   | 5.9   |    |
| NW       | 1.0                | 7.7  | 2.9   | .1    | .0    | .0  |      | 11.7      | 8.6      | 12.0     | 13.0       | 11.8  | 11.2  | 10.0  | 7.6   | 12.5  | 13.3  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 1.6                |      |       |       |       |     |      | 1.6       | .0       | 1.8      | 1.6        | 2.2   | .7    | 1.8   | .7    | 1.4   | .9    |    |
| TOT OBS  | 600                | 4193 | 4223  | 593   | 8     | 0   | 9577 |           | 11.4     | 1838     | 129        | 1874  | 916   | 1939  | 139   | 1881  | 861   |    |
| TOT PCT  | 6.3                | 43.8 | 44.1  | 5.8   | .1    | .0  |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 8.0                | 30.3 | 10.5  | .5    | .0  |           | 49.3     | 12.1     | 49.2       | 48.7  | 50.2  | 49.2  |    |
| NE       | 3.3                | 14.7 | 7.8   | .4    | .0  |           | 26.2     | 13.2     | 24.6       | 27.0  | 26.3  | 26.3  |    |
| E        | .4                 | .4   | .1    | .0    | .0  |           | .9       | 8.5      | .8         | .9    | .8    | .8    |    |
| SE       | .2                 | .1   | .0    | .0    | .0  |           | .3       | 8.2      | .3         | .5    | .2    | .2    |    |
| S        | .3                 | .6   | .1    | .0    | .0  |           | 1.1      | 10.0     | 1.1        | 1.0   | 1.3   | .9    |    |
| SW       | 1.1                | 1.8  | .3    | .0    | .0  |           | 3.2      | 9.2      | 3.5        | 2.9   | 3.8   | 2.9   |    |
| W        | 2.7                | 2.8  | .3    | .0    | .0  |           | 5.9      | 7.9      | 6.7        | 5.6   | 5.8   | 5.7   |    |
| NW       | 4.2                | 6.9  | .5    | .0    | .0  |           | 11.7     | 8.6      | 12.1       | 11.6  | 9.8   | 12.8  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.6                |      |       |       |     |           | 1.6      | .0       | 1.8        | 1.7   | 1.7   | 1.2   |    |
| TOT OBS  | 2092               | 5512 | 1886  | 87    | 0   | 9577      |          | 11.4     | 1967       | 2790  | 2078  | 2742  |    |
| TOT PCT  | 21.8               | 57.6 | 19.7  | .9    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1861-1973

JUNE

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|--------------------|------|-------|-------|-------|-----|-------|----------|-----------|
|      |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |          |           |
| 0000 | 1.8  | 4.9                | 43.9 | 44.2  | 5.2   | .1    | .0  | 11.3  | 100.0    | 1967      |
| 0600 | 1.7  | 5.2                | 46.3 | 41.2  | 5.5   | .0    | .0  | 11.0  | 100.0    | 2790      |
| 1200 | 1.7  | 5.3                | 40.7 | 46.2  | 6.0   | .1    | .0  | 11.6  | 100.0    | 2078      |
| 1800 | 1.2  | 3.5                | 43.4 | 45.4  | 6.3   | .1    | .0  | 11.7  | 100.0    | 2742      |
| TOT  | 152  | 448                | 4193 | 4223  | 553   | 8     | 0   | 11.4  |          | 9577      |
| PCT  | 1.6  | 4.7                | 43.8 | 44.1  | 5.8   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
|          |      |      |      |           |           |                  |
| N        | 14.8 | 10.3 | 16.6 | 12.4      |           | 4.6              |
| NE       | 4.9  | 4.3  | 6.3  | 4.7       |           | 4.7              |
| E        | .2   | .1   | .2   | .3        |           | 5.1              |
| SE       | .1   | .0   | .1   | .1        |           | 5.6              |
| S        | .5   | .2   | .6   | .4        |           | 4.8              |
| SW       | 1.1  | 1.0  | .8   | .2        |           | 3.6              |
| W        | 1.6  | 1.5  | 1.8  | .8        |           | 4.3              |
| NW       | 3.4  | 2.7  | 3.3  | 2.3       |           | 4.4              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | .7   | .3   | .5   | .5        |           | 4.3              |
| TOT OBS  | 1135 | 842  | 1269 | 905       | 4151      | 4.6              |
| TOT PCT  | 27.3 | 20.3 | 30.6 | 21.8      | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|----------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT  | OBS   |
| N       | .1  | .1  | .5  | 3.2 | 10.7 | 6.7  | 2.8  | .8   | .2   | .7    | 28.3     |       |
| NE      | .1  | .2  | 1.3 | 3.7 | 2.8  | 1.2  | .3   | .1   | .1   | .1    | 10.4     |       |
| E       | .0  | .0  | .0  | .1  | .1   | .0   | .0   | .0   | .0   | .0    | .4       |       |
| SE      | .0  | .0  | .0  | .1  | .1   | .0   | .0   | .0   | .0   | .0    | .1       |       |
| S       | .0  | .0  | .1  | .3  | .2   | .1   | .0   | .0   | .0   | .0    | 1.0      |       |
| SW      | .0  | .0  | .1  | .3  | .2   | .1   | .0   | .0   | .0   | .1    | 2.3      |       |
| W       | .0  | .0  | .5  | .8  | .7   | .1   | .0   | .0   | .0   | .1    | 3.6      |       |
| NW      | .0  | .0  | .1  | .6  | 1.9  | 1.4  | .4   | .1   | .0   | .1    | 7.3      |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0       |       |
| CALM    | .1  | .0  | .1  | .2  | .3   | .1   | .0   | .0   | .0   | .0    | 1.0      |       |
| TOT OBS | 9   | 6   | 46  | 244 | 753  | 520  | 202  | 53   | 17   | 44    | 2257     | 4151  |
| TOT PCT | .2  | .1  | 1.1 | 5.9 | 18.1 | 12.5 | 4.9  | 1.3  | .4   | 1.1   | 54.4     | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500     | .9        | 1.3     | 1.4     | 1.6     | 1.6       | 1.6       | 1.6        | 1.6     |
| = OR >5000     | 1.9       | 2.6     | 2.7     | 2.8     | 2.8       | 2.8       | 2.8        | 2.8     |
| = OR >3500     | 5.7       | 7.3     | 7.5     | 7.7     | 7.7       | 7.7       | 7.7        | 7.7     |
| = OR >2000     | 15.5      | 19.5    | 20.0    | 20.2    | 20.2      | 20.2      | 20.2       | 20.2    |
| = OR >1000     | 29.2      | 37.0    | 37.9    | 38.2    | 38.2      | 38.2      | 38.2       | 38.2    |
| = OR >600      | 32.9      | 42.3    | 43.7    | 43.9    | 43.9      | 43.9      | 43.9       | 43.9    |
| = OR >300      | 33.6      | 43.3    | 44.8    | 45.0    | 45.0      | 45.0      | 45.0       | 45.0    |
| = OR >150      | 33.6      | 43.4    | 44.9    | 45.2    | 45.2      | 45.2      | 45.2       | 45.2    |
| = OR >0        | 33.6      | 43.5    | 45.0    | 45.3    | 45.3      | 45.4      | 45.5       | 45.5    |
| TOTAL          | 1424      | 1840    | 1903    | 1916    | 1917      | 1920      | 1924       | 1924    |

TOTAL NUMBER OF OBS: 4233

PCT FREQ NH < 5/8: 54.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2    | 3    | 4   | 5   | 6   | 7    | 8    | OBSCD | TOTAL OBS |
|------|-----|------|------|-----|-----|-----|------|------|-------|-----------|
| 11.1 | 9.6 | 12.7 | 11.5 | 8.6 | 6.5 | 9.3 | 10.6 | 19.9 | .3    | 4483      |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1861-1973

JUNE

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E  | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .0   | *  | .0 | .0  | .0  | .0  | *    | .0  | .0   | .1    |              |
|              | TOT %  | .1   | .0   | *  | .0 | .0  | .0  | .0  | *    | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .2   | *    | .0 | .0 | .0  | *   | *   | *    | .0  | .0   | .3    |              |
|              | TOT %  | .2   | *    | .0 | .0 | .0  | *   | *   | *    | .0  | .0   | .3    |              |
| 1<2          | PCP    | .0   | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .3   | .1   | .0 | .0 | .0  | .0  | .1  | .1   | .0  | *    | .6    |              |
|              | TOT %  | .3   | .1   | .0 | .0 | .0  | .0  | .1  | .1   | .0  | *    | .6    |              |
| 2<5          | PCP    | .1   | .1   | .0 | *  | *   | *   | .0  | *    | .0  | .0   | .2    |              |
|              | NO PCP | 1.5  | .3   | .1 | *  | *   | *   | .1  | .2   | .0  | .1   | 2.4   |              |
|              | TOT %  | 1.5  | .4   | .1 | .1 | *   | *   | .1  | .3   | .0  | .1   | 2.6   |              |
| 5<10         | PCP    | .3   | .2   | *  | *  | .1  | .1  | .1  | .1   | .0  | *    | 1.0   |              |
|              | NO PCP | 11.5 | 4.8  | .1 | .1 | .2  | .8  | 1.5 | 2.5  | .0  | .6   | 22.2  |              |
|              | TOT %  | 11.7 | 5.0  | .2 | .2 | .3  | .9  | 1.6 | 2.7  | .0  | .6   | 23.2  |              |
| 10+          | PCP    | .2   | .1   | *  | *  | *   | *   | .0  | .1   | .0  | *    | .4    |              |
|              | NO PCP | 38.9 | 15.1 | .5 | .2 | 1.2 | 2.4 | 4.4 | 8.8  | .0  | 1.2  | 72.8  |              |
|              | TOT %  | 39.1 | 15.1 | .6 | .2 | 1.3 | 2.5 | 4.4 | 8.8  | .0  | 1.3  | 73.2  |              |
| TOT OBS      |        |      |      |    |    |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |    |    |     |     |     |      |     |      |       |              |
|              |        | 53.0 | 20.6 | .8 | .4 | 1.6 | 3.4 | 6.2 | 11.9 | .0  | 2.0  | 100.0 | 5021         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E  | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .0   | *  | .0 | .0  | .0  | .0  | *    | .0  | .0   | .1    |              |
|              | 11-21      | *    | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | 22+        | *    | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %      | .1   | .0   | *  | .0 | .0  | .0  | .0  | *    | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | 4-10       | .1   | *    | .0 | .0 | .0  | *   | *   | *    | .0  | .0   | .1    |              |
|              | 11-21      | .1   | *    | .0 | .0 | .0  | .0  | .0  | *    | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .2   | *    | .0 | .0 | .0  | *   | *   | *    | .0  | .0   | .2    |              |
| 1<2          | 0-3        | .0   | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | *    | *     |              |
|              | 4-10       | .1   | *    | .0 | .0 | .0  | .0  | *   | *    | .1  | .0   | .2    |              |
|              | 11-21      | .2   | .1   | .0 | .0 | .0  | .0  | .0  | *    | .0  | .0   | .3    |              |
|              | 22+        | *    | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %      | .3   | .1   | .0 | .0 | .0  | .0  | *   | .1   | .0  | *    | .5    |              |
| 2<5          | 0-3        | *    | *    | *  | *  | *   | *   | *   | *    | .0  | *    | .2    |              |
|              | 4-10       | .5   | .1   | *  | *  | .0  | *   | *   | .1   | .0  | .0   | .9    |              |
|              | 11-21      | .6   | .2   | *  | *  | *   | *   | *   | .1   | .0  | .0   | 1.0   |              |
|              | 22+        | .1   | *    | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | TOT %      | 1.2  | .4   | .1 | *  | *   | .1  | .1  | .2   | .0  | *    | 2.2   |              |
| 5<10         | 0-3        | .1   | .1   | *  | *  | *   | .1  | .1  | .1   | .0  | .5   | 1.1   |              |
|              | 4-10       | 3.8  | 1.5  | .1 | .1 | .1  | .4  | .7  | 1.3  | .0  | .0   | 7.8   |              |
|              | 11-21      | 5.3  | 2.6  | *  | *  | .1  | .2  | .4  | .9   | .0  | .0   | 9.6   |              |
|              | 22+        | 1.0  | .6   | *  | *  | *   | *   | .0  | *    | .0  | .0   | 1.7   |              |
|              | TOT %      | 10.2 | 4.8  | .2 | .1 | .2  | .7  | 1.2 | 2.3  | .0  | .5   | 20.2  |              |
| 10+          | 0-3        | .9   | .6   | .1 | *  | .1  | .2  | .5  | .9   | .0  | 1.2  | 4.6   |              |
|              | 4-10       | 15.9 | 5.7  | .4 | .1 | .5  | 1.4 | 2.8 | 5.9  | .0  | .0   | 32.6  |              |
|              | 11-21      | 19.7 | 10.9 | .2 | *  | .4  | .8  | 1.0 | 2.1  | .0  | .0   | 35.3  |              |
|              | 22+        | 2.5  | 1.7  | *  | *  | *   | *   | *   | .1   | .0  | .0   | 4.3   |              |
|              | TOT %      | 39.0 | 18.8 | .7 | .2 | 1.0 | 2.5 | 4.4 | 9.0  | .0  | 1.2  | 76.8  |              |
| TOT OBS      |            |      |      |    |    |     |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |    |    |     |     |     |      |     |      |       |              |
|              |            | 51.0 | 24.2 | .9 | .3 | 1.3 | 3.2 | 5.7 | 11.7 | .0  | 1.8  | 100.0 | 6993         |

JUNE

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1861-1973AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .2         | .0         | .8         | 5.5        | 17.5         | 9.4          | 4.4          | 1.3          | .6           | 1.1   | 40.7  | 59.3               | 1020         |
| 06009          | .6         | .4         | 1.6        | 6.5        | 23.7         | 16.1         | 6.0          | 1.1          | .6           | .8    | 57.3  | 42.7               | 1084         |
| 12015          | .2         | .1         | .9         | 5.0        | 15.9         | 12.9         | 4.7          | 1.2          | .4           | 1.4   | 42.8  | 57.2               | 1129         |
| 18021          | .2         | .1         | 1.0        | 5.6        | 13.7         | 10.5         | 4.0          | 1.4          | .1           | 1.1   | 37.7  | 62.3               | 1100         |
| TOT            | 12         | 6          | 46         | 245        | 766          | 532          | 207          | 54           | 18           | 48    | 1934  | 2399               | 4333         |
| PCT            | .3         | .1         | 1.1        | 5.7        | 17.7         | 12.3         | 4.8          | 1.2          | .4           | 1.1   | 44.6  | 55.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .3    | .3  | 1.9 | 19.2 | 78.2 | 1587         |
| 06009          | .4   | .4    | .4  | 2.0 | 24.5 | 72.3 | 1938         |
| 12015          | .1   | .1    | .4  | 2.5 | 17.3 | 79.7 | 1654         |
| 18021          | .2   | .4    | .9  | 2.5 | 19.5 | 76.6 | 1949         |
| TOT            | 14   | 20    | 36  | 159 | 1445 | 5454 | 7128         |
| PCT            | .2   | .3    | .5  | 2.2 | 20.3 | 76.5 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .2            | 1.0        | 8.5         | 34.4            | 57.1              | 991          |
| 06009          | .7            | 2.8        | 11.6        | 47.5            | 40.9              | 1066         |
| 12015          | .2            | 1.2        | 9.1         | 35.9            | 55.0              | 1102         |
| 18021          | .2            | 1.3        | 9.7         | 30.0            | 60.3              | 1074         |
| TOT            | 13            | 67         | 412         | 1565            | 2256              | 4233         |
| PCT            | .3            | 1.6        | 9.7         | 37.0            | 53.3              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | *     | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | *     | .0    | .1    | .0    | .0    | .0     | 5            | .1          |
| 75/79  | .0   | .0    | .0    | .2    | .5    | .8    | .3    | .1     | 79           | 1.9         |
| 70/74  | .0   | .0    | *     | .5    | 3.5   | 8.1   | 6.6   | 2.3    | 862          | 20.9        |
| 65/69  | .0   | .0    | .0    | .5    | 5.5   | 24.7  | 26.6  | 11.3   | 2822         | 68.5        |
| 60/64  | .0   | .0    | .0    | .8    | 2.6   | 3.1   | 2.0   | .0     | 351          | 8.5         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| TOTAL  | 0    | 0     | 3     | 51    | 423   | 1494  | 1507  | 643    | 4121         | 100.0       |
| PCT    | .0   | .0    | .1    | 1.2   | 10.3  | 36.3  | 36.6  | 15.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E  | SE | S   | SW  | W   | NW   | VAR | CALM |
|-------|------|------|----|----|-----|-----|-----|------|-----|------|
| 85/89 | *    | .0   | .0 | .0 | .0  | .0  | .0  | .0   | .0  | .0   |
| 80/84 | *    | .0   | .0 | .0 | .0  | *   | *   | .0   | .0  | *    |
| 75/79 | 1.0  | .5   | *  | .0 | .0  | .1  | .1  | .1   | .0  | .1   |
| 70/74 | 10.9 | 4.5  | .3 | .1 | .4  | .9  | 1.2 | 2.1  | .0  | .4   |
| 65/69 | 36.6 | 14.3 | .3 | .2 | 1.1 | 2.0 | 4.4 | 8.5  | .0  | 1.0  |
| 60/64 | 5.2  | 1.3  | .1 | .1 | .1  | .1  | .6  | .8   | .0  | .1   |
| 55/59 | .0   | .0   | .0 | .0 | .0  | *   | .0  | .0   | .0  | .0   |
| TOTAL | 53.8 | 20.7 | .8 | .4 | 1.7 | 3.2 | 6.4 | 11.5 | .0  | 1.7  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 77  | 72  | 70  | 66  | 63 | 62 | 58  | 66.4 | 2001         |
| 06009          | 79  | 73  | 71  | 66  | 63 | 61 | 56  | 66.5 | 2794         |
| 12015          | 84  | 78  | 75  | 69  | 65 | 63 | 56  | 69.8 | 2036         |
| 18021          | 86  | 78  | 75  | 68  | 65 | 63 | 56  | 68.9 | 2697         |
| TOT            | 86  | 77  | 73  | 68  | 64 | 62 | 56  | 67.9 | 9528         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .5    | 5.2   | 30.7  | 41.3  | 22.3   | 82   | 1026         |
| 06009         | .0   | .6    | 7.1   | 32.7  | 38.7  | 20.9   | 82   | 1081         |
| 12015         | .0   | 2.3   | 17.0  | 42.2  | 30.2  | 8.4    | 77   | 1051         |
| 18021         | .0   | 2.1   | 12.2  | 38.7  | 35.8  | 11.3   | 78   | 1057         |
| TOT           | 0    | 57    | 438   | 1521  | 1537  | 662    | 80   | 4215         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1861-1973

JUNE

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | M<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 14/16              | .0       | .0       | .0       | *        | .0       | .0       | .1       | 4     | .0       | .1        |
| 11/13              | .0       | .0       | *        | .1       | .1       | .1       | *        | 18    | *        | .4        |
| 9/10               | .0       | *        | .1       | .1       | .2       | .2       | *        | 30    | .1       | .5        |
| 7/8                | .0       | .0       | *        | .5       | .7       | .5       | .0       | 81    | .1       | 1.7       |
| 6                  | .0       | .0       | *        | .4       | .4       | .0       | .0       | 41    | .1       | .8        |
| 5                  | .0       | .0       | .2       | 1.0      | 1.2      | .1       | *        | 113   | .1       | 2.4       |
| 4                  | .0       | .0       | .8       | 2.0      | 1.1      | .1       | .0       | 179   | .2       | 3.7       |
| 3                  | *        | *        | 1.1      | 3.2      | .6       | *        | .0       | 226   | .2       | 4.7       |
| 2                  | .0       | .1       | 2.9      | 5.1      | .7       | .0       | .0       | 398   | .3       | 8.4       |
| 1                  | *        | .3       | 6.8      | 6.5      | .2       | .0       | .0       | 634   | .5       | 13.4      |
| 0                  | .0       | 1.2      | 15.2     | 5.4      | .2       | *        | .0       | 1010  | .5       | 21.5      |
| -1                 | *        | 2.0      | 14.7     | 2.2      | .1       | .0       | .0       | 871   | .5       | 18.5      |
| -2                 | *        | 2.2      | 7.5      | 1.0      | .1       | .0       | .0       | 498   | .3       | 10.5      |
| -3                 | .0       | 1.5      | 3.1      | .5       | .0       | *        | .0       | 238   | .2       | 5.0       |
| -4                 | *        | .7       | 1.7      | .3       | .0       | .0       | .0       | 124   | .1       | 2.6       |
| -5                 | .1       | .5       | .6       | .1       | .0       | .0       | .0       | 61    | *        | 1.3       |
| -6                 | *        | .2       | .3       | *        | .0       | .0       | .0       | 26    | *        | .5        |
| -7/-8              | *        | .1       | .3       | *        | .0       | .0       | .0       | 23    | *        | .5        |
| -9/-10             | *        | *        | *        | *        | .0       | .0       | .0       | 6     | .0       | .1        |
| -11/-13            | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 13       | 415      | 2546     | 1303     | 252      | 47       | 8        | 4584  | 147      | 4437      |
| PCT                | .3       | 9.1      | 55.5     | 28.4     | 5.5      | 1.0      | .2       | 100.0 | 3.2      | 96.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 2.4  | .1    | .0    | .0    | .0  | 2.9  | .3  | .6   | *     | .0    | .0    | .0  | .9   |
| 1-2     | .4  | 10.5 | 5.5   | .0    | .0    | .0  | 16.3 | .1  | 2.1  | 2.2   | .0    | .0    | .0  | 4.4  |
| 3-4     | .0  | 5.0  | 11.9  | .4    | .0    | .0  | 17.3 | .0  | 1.2  | 4.8   | .3    | .0    | .0  | 6.3  |
| 5-6     | .0  | 1.1  | 8.8   | 1.7   | .0    | .0  | 11.6 | .0  | .4   | 4.1   | .8    | *     | .0  | 5.3  |
| 7       | .0  | .2   | 3.1   | 1.3   | .1    | .0  | 4.6  | .0  | *    | 1.5   | .5    | *     | .0  | 2.1  |
| 8-9     | .0  | *    | 1.1   | .4    | .1    | .0  | 1.8  | .0  | *    | .5    | .2    | *     | .0  | .7   |
| 10-11   | .0  | .0   | .3    | .4    | *     | .0  | .7   | .0  | .0   | .1    | .2    | *     | .0  | .3   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .8  | 19.1 | 30.8  | 4.5   | .2    | .0  | 55.4 | .4  | 4.4  | 13.3  | 2.2   | .1    | .0  | 20.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .3   | .1    | .0    | .0    | .0  | .4  | .0  | *    | .1    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 5-6     | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | .3   | .3    | .0    | .0    | .0  | .7  | *   | *    | .2    | .1    | .0    | .0  | .3  |

PERIOD: (OVER-ALL) 1963-1973

JUNE  
TABLE 18 (CONT)AREA 0003 CASABLANCA SW  
31.7N 13.1W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .1  | .2   | *     | .0    | .0    | .0  |  | .4  | .1  | .3   | .0    | .0    | .0    | .0  |  | .4  |
| 1-2     | .1  | .3   | .3    | .0    | .0    | .0  |  | .7  | .0  | .8   | .3    | .0    | .0    | .0  |  | 1.1 |
| 3-4     | .0  | .2   | .4    | .1    | .0    | .0  |  | .7  | *   | .2   | .5    | *     | .0    | .0  |  | .8  |
| 5-6     | .0  | *    | .2    | .0    | .0    | .0  |  | .3  | .0  | *    | .4    | .1    | .0    | .0  |  | .5  |
| 7       | .0  | .0   | .1    | *     | .0    | .0  |  | .1  | .0  | .0   | *     | .0    | .0    | .0  |  | *   |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  |  | *   | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .1  | .8   | 1.1   | .1    | .0    | .0  |  | 2.1 | .1  | 1.3  | 1.3   | .1    | .0    | .0  |  | 2.9 |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |           |
| <1      | .4  | .6   | .0    | .0    | .0    | .0  |  | 1.0 | .4  | 1.3  | *     | .0    | .0    | .0  |  | 1.7  |           |
| 1-2     | .2  | 1.7  | .5    | .0    | .0    | .0  |  | 2.4 | .3  | 4.3  | 1.1   | .0    | .0    | .0  |  | 5.8  |           |
| 3-4     | .0  | .6   | .5    | .0    | .0    | .0  |  | 1.1 | .1  | 1.0  | 1.2   | *     | .0    | .0  |  | 2.3  |           |
| 5-6     | .0  | .2   | .5    | .0    | .0    | .0  |  | .7  | .0  | .2   | .5    | .0    | .0    | .0  |  | .7   |           |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  |  | .2  | .0  | .1   | .1    | *     | .0    | .0  |  | .2   |           |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  | .0  | *    | *     | .1    | .0    | .0  |  | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | *     | *     | .0    | .0  |  | *    |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| TOT PCT | .6  | 3.0  | 1.8   | .0    | .0    | .0  |  | 5.4 | .8  | 7.0  | 3.1   | .1    | .0    | .0  |  | 10.9 | 98.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.3 | 5.5  | .2    | .0    | .0    | .0  | 10.1  |         |
| 1-2     | 1.2 | 19.8 | 10.0  | .0    | .0    | .0  | 31.0  |         |
| 3-4     | .1  | 8.2  | 19.3  | .9    | .0    | .0  | 28.4  |         |
| 5-6     | .0  | 2.0  | 14.4  | 2.5   | *     | .0  | 19.0  |         |
| 7       | *   | .3   | 5.0   | 1.9   | .1    | .0  | 7.2   |         |
| 8-9     | .0  | .1   | 1.7   | .9    | .1    | .0  | 2.8   |         |
| 10-11   | .0  | .0   | .5    | .6    | *     | .0  | 1.1   |         |
| 12      | .0  | .0   | .1    | .2    | .0    | .0  | .2    |         |
| 13-16   | *   | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.7 | 35.9 | 51.2  | 7.0   | .2    | .0  | 100.0 | 2644    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| 6-7          | 1.3 | 9.4  | 12.0 | 7.1  | 2.2  | 1.2 | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1124  | 4        |
| 8-9          | *   | 1.3  | 6.5  | 9.0  | 5.8  | 2.7 | 1.3   | .3  | .2    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 911   | 6        |
| 10-11        | .0  | .6   | 1.7  | 3.9  | 2.6  | 1.8 | .8    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 390   | 6        |
| 12-13        | .0  | .5   | .8   | .9   | 1.0  | 1.0 | .5    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 165   | 8        |
| >13          | .0  | .0   | .4   | .3   | .4   | .2  | .2    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 55    | 6        |
| INDET        | .0  | .0   | .0   | .2   | .1   | *   | .1    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12    | 7        |
| TOTAL        | 2.0 | 4.0  | 5.2  | 3.3  | 2.9  | 1.4 | .7    | *   | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 657   | 4        |
| PCT          | 111 | 523  | 883  | 817  | 500  | 281 | 139   | 32  | 26    | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3314  | 5        |
| TOT PCT      | 3.3 | 15.8 | 26.6 | 24.6 | 15.1 | 8.5 | 4.2   | 1.0 | .8    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1857-1973

JULY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRIZ | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | .4        | .2   | .0        | .0   | .0              | .0   | .7                      | .2             | .2        | 2.6         | *                   | 4.0        | .1              | 92.2       |
| NE       | .1                 | .2        | .2   | .0        | .0   | .0              | .0   | .6                      | .1             | .2        | 3.6         | .1                  | 3.6        | .1              | 91.8       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 1.9         | .0                  | 6.6        | .0              | 91.5       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 13.3        | .0                  | 16.7       | .0              | 70.0       |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 3.9         | .0                  | .0         | .0              | 96.1       |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 1.3         | .0                  | 2.7        | .0              | 96.0       |
| W        | .0                 | 1.2       | .9   | .0        | .0   | .0              | .0   | 2.1                     | .0             | .0        | 6.4         | .0                  | .0         | .0              | 91.5       |
| NW       | .0                 | .0        | .5   | .0        | .0   | .0              | .0   | .5                      | .3             | .0        | 3.6         | .0                  | 2.9        | .0              | 92.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 9.3         | .0                  | 7.0        | .0              | 83.7       |
| TOT PCT  | .1                 | .3        | .3   | .0        | .0   | .0              | .0   | .6                      | .1             | .2        | 3.1         | *                   | 3.8        | .1              | 92.0       |
| TOT OBS: | 5450               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRIZ | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .1                 | .4        | .5   | .0        | .0   | .0              | .0   | .9                      | .2             | .3        | 2.5         | .0                  | 3.1        | .1              | 92.9       |
| 06009      | .1                 | .5        | .2   | .0        | .0   | .0              | .0   | .8                      | .2             | .4        | 3.7         | .1                  | 3.0        | .1              | 91.7       |
| 12015      | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | .0        | 3.4         | .1                  | 4.6        | .1              | 91.4       |
| 18021      | .1                 | .1        | .2   | .0        | .0   | .0              | .0   | .5                      | .1             | .1        | 2.9         | .0                  | 4.6        | .1              | 91.7       |
| TOT PCT    | .1                 | .3        | .3   | .0        | .0   | .0              | .0   | .6                      | .1             | .2        | 3.2         | *                   | 3.8        | .1              | 91.9       |
| TOT OBS:   | 5513               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.0                | 18.4 | 27.9  | 4.4   | .1    | .0  |      | 51.8      | 13.2     | 52.6     | 56.1       | 50.9  | 47.0  | 51.5  | 58.4  | 54.4  | 49.6  |    |
| NE       | .5                 | 9.2  | 22.2  | 4.8   | .1    | .0  |      | 36.8      | 14.6     | 35.9     | 32.2       | 37.1  | 40.5  | 37.7  | 36.0  | 34.7  | 38.0  |    |
| E        | *                  | .4   | .4    | *     | .0    | .0  |      | .8        | 10.9     | .6       | .8         | .8    | .4    | 1.0   | .7    | 1.0   | .5    |    |
| SE       | *                  | *    | *     | .0    | .0    | .0  |      | .1        | 7.0      | .2       | .0         | .2    | .0    | .1    | .0    | *     | .0    |    |
| S        | .1                 | .2   | *     | *     | .0    | .0  |      | .3        | 6.7      | .3       | .0         | .4    | .1    | .4    | .0    | .1    | .1    |    |
| SW       | .1                 | .7   | .1    | *     | .0    | .0  |      | .8        | 6.7      | .8       | 1.4        | .8    | 1.1   | .8    | .0    | .8    | .6    |    |
| W        | .5                 | 1.4  | .2    | *     | .0    | .0  |      | 2.1       | 6.5      | 1.9      | 2.3        | 2.2   | 3.2   | 2.0   | .7    | 1.8   | 2.7   |    |
| NW       | .5                 | 4.4  | 1.4   | .1    | *     | .0  |      | 6.4       | 8.6      | 6.6      | 5.7        | 6.6   | 6.6   | 5.5   | 2.6   | 6.7   | 7.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | .9                 |      |       |       |       |     |      | .9        | .0       | 1.1      | 1.6        | 1.0   | 1.1   | .9    | 1.5   | .4    | .6    |    |
| TOT OBS  | 355                | 3441 | 5189  | 926   | 16    | 0   | 9927 |           | 13.0     | 1916     | 128        | 1983  | 890   | 2018  | 134   | 2002  | 856   |    |
| TOT PCT  | 3.6                | 34.7 | 52.3  | 9.3   | .2    | .0  |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 6.2                | 30.8 | 13.8  | 1.0   | .0  |           | 51.8     | 13.2     | 52.6       | 49.7  | 52.0  | 53.0  |    |
| NE       | 2.8                | 20.0 | 12.9  | 1.1   | .0  |           | 36.8     | 14.6     | 35.6       | 38.1  | 37.6  | 35.7  |    |
| E        | .2                 | .5   | .1    | .0    | .0  |           | .8       | 10.9     | .6         | .7    | 1.0   | .8    |    |
| SE       | .1                 | *    | .0    | .0    | .0  |           | .1       | 7.0      | .2         | .1    | .1    | *     |    |
| S        | .2                 | .1   | *     | .0    | .0  |           | .3       | 6.7      | .2         | .3    | .4    | .1    |    |
| SW       | .5                 | .3   | *     | .0    | .0  |           | .8       | 6.7      | .8         | .9    | .8    | .8    |    |
| W        | 1.3                | .8   | .1    | .0    | .0  |           | 2.1      | 6.5      | 2.0        | 2.5   | 1.9   | 2.1   |    |
| NW       | 2.5                | 3.5  | .4    | *     | .0  |           | 6.4      | 8.6      | 6.6        | 6.6   | 5.3   | 7.1   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | .9                 |      |       |       |     |           | .9       | .0       | 1.2        | 1.0   | 1.0   | .5    |    |
| TOT OBS  | 1455               | 5560 | 2701  | 211   | 0   | 9927      |          | 13.0     | 2044       | 2873  | 2152  | 2858  |    |
| TOT PCT  | 14.7               | 56.0 | 27.2  | 2.1   | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1857-1973

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31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |  | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|--|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |  |     |       |          |           |
| 00003 | 1.2  | 2.3 | 35.4 | 52.0               | 9.1   | *     |  | .0  | 13.0  | 100.0    | 2044      |
| 06009 | 1.0  | 3.4 | 35.2 | 51.2               | 8.9   | .3    |  | .0  | 12.8  | 100.0    | 2873      |
| 12015 | 1.0  | 2.8 | 33.0 | 53.0               | 10.0  | .2    |  | .0  | 13.3  | 100.0    | 2152      |
| 18021 | .5   | 2.2 | 34.8 | 53.0               | 9.4   | .1    |  | .0  | 13.2  | 100.0    | 2858      |
| TOT   | 88   | 267 | 3441 | 5189               | 926   | 16    |  | 0   | 13.0  |          | 9927      |
| PCT   | .9   | 2.7 | 34.7 | 52.3               | 9.3   | .2    |  | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
|          |      |      |      |               |              |                        |
| N        | 18.3 | 10.2 | 16.3 | 12.8          |              | 4.4                    |
| NE       | 9.7  | 5.5  | 10.4 | 7.3           |              | 4.5                    |
| E        | .4   | .2   | .2   | .3            |              | 4.3                    |
| SE       | *    | *    | .1   | *             |              | 5.0                    |
| S        | .1   | .1   | .1   | .1            |              | 3.7                    |
| SW       | .2   | .1   | .1   | .2            |              | 3.9                    |
| W        | .6   | .2   | .3   | .1            |              | 3.2                    |
| NW       | 2.1  | .9   | 1.1  | 1.1           |              | 3.9                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | .4   | .1   | .1   | .2            |              | 3.4                    |
| TOT OBS  | 1447 | 788  | 1304 | 1008          | 4547         | 4.4                    |
| TOT PCT  | 31.8 | 17.3 | 28.7 | 22.2          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| .2  | .1  | .7  | 3.1 | 10.4 | 7.4  | 3.0  | .9   | .5   | .3    | 31.0               |              |
| .1  | .1  | .3  | 1.9 | 5.9  | 5.3  | 1.8  | .5   | .1   | .3    | 16.6               |              |
| *   | *   | *   | *   | .1   | .3   | *    | *    | *    | *     | .0                 | .6           |
| .0  | .0  | .0  | .0  | *    | .0   | *    | .0   | *    | *     | .0                 | .1           |
| .0  | .0  | .0  | .0  | .1   | *    | .0   | .0   | *    | *     | .3                 |              |
| *   | .0  | .0  | *   | .1   | *    | .0   | .0   | *    | *     | .4                 |              |
| *   | .0  | .0  | *   | .1   | .1   | *    | *    | *    | *     | 1.0                |              |
| *   | .0  | *   | .2  | .9   | .4   | .3   | .1   | .1   | *     | 3.2                |              |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 | .0           |
| .1  | .0  | .0  | .1  | *    | *    | .0   | .0   | .0   | .0    | .5                 |              |
| 23  | 7   | 48  | 246 | 799  | 619  | 236  | 69   | 36   | 30    | 2434               | 4547         |
| .5  | .2  | 1.1 | 5.4 | 17.6 | 13.6 | 5.2  | 1.5  | .8   | .7    | 53.5               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.4        | 1.4        | 1.4        | 1.4          | 1.4          | 1.4           | 1.4        |
| = OR >5000        | 2.1         | 2.8        | 2.9        | 2.9        | 2.9          | 2.9          | 2.9           | 2.9        |
| = OR >3500        | 6.1         | 7.8        | 8.1        | 8.1        | 8.1          | 8.1          | 8.1           | 8.1        |
| = OR >2000        | 16.4        | 21.0       | 21.6       | 21.6       | 21.6         | 21.6         | 21.6          | 21.6       |
| = OR >1000        | 30.6        | 38.3       | 39.0       | 39.1       | 39.1         | 39.1         | 39.1          | 39.1       |
| = OR >600         | 34.3        | 43.4       | 44.4       | 44.4       | 44.4         | 44.5         | 44.5          | 44.5       |
| = OR >300         | 34.9        | 44.4       | 45.5       | 45.5       | 45.5         | 45.5         | 45.5          | 45.5       |
| = OR >150         | 35.0        | 44.6       | 45.6       | 45.7       | 45.7         | 45.7         | 45.7          | 45.7       |
| = OR >0           | 35.1        | 44.7       | 45.8       | 45.9       | 45.9         | 46.0         | 46.2          | 46.2       |
| TOTAL             | 1604        | 2047       | 2097       | 2099       | 2099         | 2104         | 2113          | 2114       |

TOTAL NUMBER OF OBS: 4576

PCT FREQ NH <5/8: 53.8

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2    | 3   | 4   | 5   | 6   | 7    | 8    | OBS CD | TOTAL<br>OBS |
|------|-----|------|-----|-----|-----|-----|------|------|--------|--------------|
| 16.8 | 8.9 | 10.0 | 9.5 | 8.0 | 6.3 | 8.7 | 11.6 | 19.8 | .3     | 4840         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1857-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | .1   | .0  | .0 | .0 | .0 | *   | *   | .0  | *    | .3    |              |
|              | TOT %  | .2   | .1   | .0  | .0 | .0 | .0 | *   | *   | .0  | *    | .3    |              |
| 1/2<1        | PCP    | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .3   | .3   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .6    |              |
|              | TOT %  | .3   | .3   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .6    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .4   | .2   | .0  | .0 | .0 | .0 | *   | *   | .0  | .0   | .6    |              |
|              | TOT %  | .4   | .2   | .0  | .0 | .0 | .0 | *   | *   | .0  | .0   | .6    |              |
| 2<5          | PCP    | *    | .0   | .0  | .0 | .0 | .0 | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | 1.2  | 1.0  | *   | .0 | *  | *  | .1  | .2  | .0  | .1   | 2.6   |              |
|              | TOT %  | 1.2  | 1.0  | *   | .0 | *  | *  | .1  | .2  | .0  | .1   | 2.6   |              |
| 5<10         | PCP    | .2   | .1   | .0  | .0 | .0 | .0 | *   | *   | .0  | .0   | .4    |              |
|              | NO PCP | 14.1 | 9.0  | .4  | .1 | .1 | .2 | .5  | 1.5 | .0  | .2   | 26.0  |              |
|              | TOT %  | 14.3 | 9.1  | .4  | .1 | .1 | .2 | .6  | 1.5 | .0  | .2   | 26.4  |              |
| 10+          | PCP    | .1   | .1   | .0  | .0 | .0 | .0 | *   | *   | .0  | .0   | .2    |              |
|              | NO PCP | 40.2 | 22.8 | .5  | *  | .3 | .5 | .9  | 3.6 | .0  | .5   | 69.2  |              |
|              | TOT %  | 40.3 | 22.9 | .5  | *  | .3 | .5 | .9  | 3.6 | .0  | .5   | 69.4  |              |
| TOT OBS      |        | 5439 |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |        | 56.7 | 33.5 | 1.0 | .1 | .4 | .7 | 1.5 | 5.3 | .0  | .8   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E  | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | .0 | .0 | .0 | .0 | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | .1   | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .1   | .0 | .0 | .0 | .0 | *   | *   | .0  | *    | .3    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .2   | .2   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .4    |              |
|              | 22+        | *    | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | .2   | .2   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .5    |              |
| 1<2          | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .2    |              |
|              | 11-21      | .3   | .1   | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .4    |              |
|              | 22+        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .4   | .1   | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .5    |              |
| 2<5          | 0-3        | .1   | *    | .0 | .0 | *  | *  | *   | *   | .0  | .1   | .2    |              |
|              | 4-10       | .5   | .3   | .0 | .0 | *  | *  | *   | .1  | .0  | .0   | 1.0   |              |
|              | 11-21      | .6   | .6   | .0 | .0 | .0 | .0 | .0  | .1  | .0  | .0   | 1.3   |              |
|              | 22+        | .1   | .2   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .3    |              |
|              | TOT %      | 1.2  | 1.1  | *  | .0 | *  | *  | .1  | .2  | .0  | .1   | 2.8   |              |
| 5<10         | 0-3        | .3   | .1   | *  | .0 | *  | *  | .1  | .1  | .0  | .2   | .8    |              |
|              | 4-10       | 4.4  | 2.4  | .2 | *  | *  | .1 | .3  | .8  | .0  | .0   | 8.2   |              |
|              | 11-21      | 7.1  | 5.3  | .1 | *  | *  | .1 | .4  | .0  | .0  | .0   | 13.1  |              |
|              | 22+        | 1.3  | 1.4  | *  | .0 | .0 | .0 | .0  | *   | .0  | .0   | 2.8   |              |
|              | TOT %      | 13.1 | 9.2  | .3 | .1 | .1 | .1 | .5  | 1.3 | .0  | .2   | 24.9  |              |
| 10+          | 0-3        | .6   | .2   | *  | *  | *  | *  | .2  | .4  | .0  | .5   | 2.0   |              |
|              | 4-10       | 13.0 | 9.5  | .2 | *  | .1 | .4 | .8  | 2.8 | .0  | .0   | 22.8  |              |
|              | 11-21      | 22.3 | 15.6 | .2 | *  | .1 | *  | .1  | .9  | .0  | .0   | 39.2  |              |
|              | 22+        | 3.5  | 3.4  | *  | .0 | *  | *  | .0  | .1  | .0  | .0   | 7.0   |              |
|              | TOT %      | 39.5 | 24.7 | .5 | *  | .2 | .4 | 1.1 | 4.1 | .0  | .5   | 71.1  |              |
| TOT OBS      |            | 7483 |      |    |    |    |    |     |     |     |      |       |              |
| TOT PCT      |            | 54.5 | 35.5 | .8 | .1 | .3 | .6 | 1.7 | 5.7 | .0  | .8   | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1857-1973

JULY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .5         | .0         | .9         | 5.0        | 17.5         | 12.1         | 3.8          | .7           | .7           | .5    | 41.6  | 58.4               | 1071         |
| 06009         | .8         | .3         | 1.2        | 7.0        | 22.1         | 17.5         | 5.6          | 2.3          | .8           | .4    | 58.2  | 41.8               | 1188         |
| 12015         | .3         | .2         | .9         | 5.1        | 15.6         | 13.0         | 5.6          | 2.1          | .9           | 1.1   | 44.8  | 55.2               | 1220         |
| 18021         | .4         | .1         | 1.1        | 4.0        | 13.0         | 10.5         | 4.9          | .7           | .7           | .6    | 36.0  | 64.0               | 1220         |
| TOT           | 24         | 7          | 48         | 248        | 799          | 625          | 236          | 89           | 36           | 30    | 2122  | 2577               | 4699         |
| PCT           | .5         | .1         | 1.0        | 5.3        | 17.0         | 13.3         | 5.0          | 1.5          | .8           | .6    | 45.2  | 54.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .4    | .8  | 2.7 | 24.6 | 71.3 | 1662         |
| 06009         | .4   | .4    | .4  | 3.4 | 27.2 | 68.2 | 2077         |
| 12015         | .3   | .6    | .5  | 3.0 | 21.8 | 73.8 | 1749         |
| 18021         | .1   | .7    | .5  | 2.2 | 25.6 | 70.8 | 2060         |
| TOT           | 19   | 39    | 40  | 215 | 1884 | 5351 | 7548         |
| PCT           | .3   | .5    | .5  | 2.8 | 25.0 | 70.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .5            | 1.5        | 9.1         | 35.6            | 55.3              | 1022         |
| 06009         | .9            | 2.4        | 12.7        | 48.6            | 58.7              | 1167         |
| 12015         | .3            | 1.6        | 9.6         | 38.1            | 52.3              | 1199         |
| 18021         | .4            | 1.6        | 8.3         | 30.6            | 61.1              | 1188         |
| TOT           | 24            | 81         | 455         | 1751            | 2370              | 4576         |
| PCT           | .5            | 1.8        | 9.9         | 38.3            | 51.8              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | .0          |
| 80/84  | .0   | .0    | .0    | .0    | .2    | .2    | .0    | .0     | 26           | .6          |
| 75/79  | .0   | .0    | .0    | .2    | 1.4   | 3.3   | 1.7   | .4     | 312          | 6.9         |
| 70/74  | .0   | .0    | .0    | .2    | 5.0   | 16.6  | 18.0  | 9.1    | 2199         | 48.9        |
| 65/69  | .0   | .0    | .0    | .0    | 1.5   | 14.7  | 19.2  | 7.7    | 1940         | 43.1        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .1    | .2    | .1     | 21           | .5          |
| TOTAL  | 0    | 0     | 1     | 20    | 367   | 1573  | 1760  | 778    | 4499         | 100.0       |
| PCT    | .0   | .0    | .0    | .4    | 8.2   | 35.0  | 39.1  | 17.3   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|----|----|-----|-----|-----|------|
| 85/89 | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 80/84 | .3   | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 75/79 | 4.0  | 2.1  | .2  | .0 | .0 | .1 | .1  | .3  | .0  | .1   |
| 70/74 | 26.8 | 16.8 | .6  | .1 | .2 | .3 | .8  | 3.0 | .0  | .3   |
| 65/69 | 25.7 | 14.4 | .2  | .0 | .1 | .2 | .4  | 1.8 | .0  | .3   |
| 60/64 | .3   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| TOTAL | 57.1 | 33.6 | 1.0 | .1 | .3 | .6 | 1.4 | 5.2 | .0  | .7   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 75  | 73  | 69  | 66 | 64 | 58  | 68.9 | 2058         |
| 06009         | 85  | 76  | 73  | 69  | 65 | 64 | 58  | 69.0 | 2864         |
| 12015         | 87  | 81  | 78  | 72  | 68 | 66 | 61  | 72.1 | 2109         |
| 18021         | 86  | 80  | 77  | 71  | 67 | 65 | 63  | 71.4 | 2806         |
| TOT           | 87  | 79  | 76  | 70  | 66 | 64 | 58  | 70.3 | 9837         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .1    | 2.7   | 27.3  | 46.7  | 23.2   | 83   | 1089         |
| 06009         | .0   | .4    | 3.8   | 29.5  | 42.6  | 23.6   | 83   | 1148         |
| 12015         | .0   | .9    | 16.2  | 42.1  | 30.6  | 10.2   | 78   | 1136         |
| 18021         | .0   | .4    | 9.8   | 40.2  | 36.7  | 12.8   | 80   | 1169         |
| TOT           | 0    | 21    | 372   | 1584  | 1775  | 790    | 81   | 4542         |



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PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1857-1973AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERAT (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0       | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .0       | 15    | .1       | .2        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .5       | .1       | .0       | 37    | .1       | .7        |
| 7/8                | .0       | .0       | .0       | .1       | .6       | .8       | .1       | .0       | 80    | .1       | 1.5       |
| 6                  | .0       | .0       | *        | .3       | .6       | .5       | *        | *        | 76    | .1       | 1.4       |
| 5                  | .0       | .0       | .1       | .4       | 2.0      | .5       | .0       | .0       | 150   | .1       | 2.9       |
| 4                  | .0       | *        | .2       | 1.6      | 2.6      | .4       | *        | .0       | 239   | .2       | 4.6       |
| 3                  | .0       | .0       | .3       | 3.0      | 2.8      | .1       | .0       | .0       | 309   | .1       | 6.1       |
| 2                  | .0       | .0       | .8       | 6.4      | 3.3      | .1       | .1       | .0       | 530   | .3       | 10.3      |
| 1                  | .0       | *        | 2.0      | 11.0     | 2.5      | *        | .0       | .0       | 772   | .5       | 15.0      |
| 0                  | .0       | .1       | 5.9      | 13.8     | 1.2      | .1       | .0       | .0       | 1051  | .7       | 20.4      |
| -1                 | .0       | .1       | 8.2      | 8.6      | .4       | *        | .0       | .0       | 866   | .5       | 16.9      |
| -2                 | .0       | .2       | 5.0      | 4.1      | .2       | *        | *        | .0       | 472   | .3       | 9.1       |
| -3                 | .0       | .1       | 1.6      | 1.8      | .1       | .0       | .0       | .0       | 181   | .1       | 3.6       |
| -4                 | .0       | .1       | 1.0      | .6       | .1       | .0       | .0       | .0       | 89    | .1       | 1.7       |
| -5                 | .0       | .1       | .5       | .4       | *        | .0       | .0       | .0       | 55    | *        | 1.1       |
| -6                 | .0       | .0       | .3       | .1       | *        | .0       | .0       | .0       | 19    | .0       | .4        |
| -7/-8              | .0       | .1       | .2       | .2       | *        | .0       | .0       | .0       | 21    | .1       | .4        |
| -9/-10             | *        | .0       | .1       | *        | .0       | .0       | .0       | .0       | 7     | .0       | .1        |
| -11/-13            | .0       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 7     | *        | .1        |
| TOTAL              | 1        |          | 1308     |          | 827      |          | 25       |          | 4978  | 167      | 4611      |
| PCT                | *        | .8       | 26.3     | 52.4     | 16.6     | 3.3      | .5       | *        | 100.0 | 3.4      | 96.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | 1.7  | .2    | .0    | .0    | .0  | 2.3  | .2  | .5   | *     | .0    | .0    | .0  | .8   |
| 1-2     | .2  | 9.2  | 6.4   | .0    | .0    | .0  | 15.8 | .1  | 3.7  | 2.8   | .0    | .0    | .0  | 6.6  |
| 3-4     | .1  | 5.6  | 12.5  | .8    | .0    | .0  | 18.9 | *   | 2.0  | 6.9   | .8    | .0    | .0  | 9.7  |
| 5-6     | .0  | .9   | 10.6  | 1.6   | *     | .0  | 13.1 | .0  | .4   | 6.5   | 1.3   | .1    | .0  | 8.4  |
| 7       | .0  | .2   | 3.7   | 1.5   | .1    | .0  | 5.4  | .0  | .1   | 2.8   | 1.2   | *     | .0  | 4.0  |
| 8-9     | .0  | .0   | 1.2   | .9    | .0    | .0  | 2.1  | .0  | .0   | 1.0   | 1.1   | .0    | .0  | 2.2  |
| 10-11   | .0  | .0   | .4    | .5    | .0    | .0  | .8   | .0  | .0   | .1    | .6    | .0    | .0  | .7   |
| 12      | .0  | .0   | *     | .2    | .0    | .0  | .3   | .0  | .0   | *     | .3    | .0    | .0  | .3   |
| 13-16   | .0  | .0   | *     | .2    | .0    | .0  | .3   | .0  | .0   | *     | .3    | .0    | .0  | .4   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 17.5 | 35.1  | 5.7   | .1    | .0  | 59.0 | .3  | 6.7  | 20.2  | 5.6   | .2    | .0  | 33.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .2   | .1    | .0    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .3   | .4    | .0    | .0    | .0  | .7  | .0  | *    | .0    | .0    | .0    | .0  | *   |

PERIOD: (OVER-ALL) 1963-1973

JULY

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .2   | .1    | .0    | .0    | .0  | .4  | .0  | .3   | .1    | .0    | .0    | .0  | .4  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .1   | .0    | .0    | .0    | .0  | .3  | .1  | .4   | .0    | .0    | .0    | .0  | .6  |           |
| 1-2     | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .1  | 1.9  | .4    | .0    | .0    | .0  | 2.4 |           |
| 3-4     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .4   | .7    | .0    | .0    | .0  | 1.1 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .3    | .0    | .0    | .0  | .4  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | .6   | .1    | .0    | .0    | .0  | .9  | .3  | 2.8  | 1.5   | .1    | .0    | .0  | 4.7 | 99.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.9 | 3.0  | .3    | .0    | .0    | .0  | 5.2   |         |
| 1-2     | .6  | 15.6 | 9.7   | .0    | .0    | .0  | 25.9  |         |
| 3-4     | .1  | 8.1  | 20.4  | 1.6   | .0    | .0  | 30.3  |         |
| 5-6     | .0  | 1.5  | 17.4  | 3.0   | .1    | .0  | 22.0  |         |
| 7       | .0  | .2   | 6.6   | 2.7   | .1    | .0  | 9.6   |         |
| 8-9     | .0  | .0   | 2.3   | 2.0   | .0    | .0  | 4.3   |         |
| 10-11   | .0  | .0   | .5    | 1.1   | .0    | .0  | 1.6   |         |
| 12      | .0  | .0   | .0    | .5    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | .0    | .6    | .0    | .0  | .6    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.6 | 28.5 | 57.3  | 11.4  | .2    | .0  | 100.0 | 2936    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.1 | 7.4  | 12.2 | 7.8  | 3.4  | 1.2 | .2    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1213  | 4        |
| 6-7          | .0  | 1.0  | 6.0  | 9.1  | 6.8  | 2.8 | 1.8   | .4  | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1036  | 6        |
| 8-9          | .0  | .3   | 1.4  | 3.5  | 4.3  | 2.9 | 1.0   | .7  | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 540   | 7        |
| 10-11        | .0  | .2   | .6   | 1.0  | 1.2  | .7  | .5    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 162   | 7        |
| 12-13        | .0  | .0   | .7   | .3   | .4   | .2  | .2    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 69    | 6        |
| >13          | .0  | .0   | .0   | .3   | .2   | .0  | .1    | .0  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 30    | 8        |
| INDET        | 1.2 | 3.3  | 4.9  | 2.3  | 2.0  | 1.3 | .9    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 594   | 4        |
| TOTAL        | 83  | 444  | 939  | 886  | 665  | 333 | 168   | 84  | 5     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3644  | 5        |
| PCT          | 2.3 | 12.2 | 25.8 | 24.3 | 18.2 | 9.1 | 4.6   | 1.5 | 1.8   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0003 CASABLANCA SW  
31.7N 13.2W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR      | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|---------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|               | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZG PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N             | .1                 | .1        | .2   | .0        | .0   | .0              | .0   | .4                      | .3             | .3        | 1.7         | .0                  | 2.4        | *               | 94.9       |
| NE            | *                  | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .2             | .4        | 1.9         | .0                  | 1.5        | .1              | 95.7       |
| E             | .0                 | 1.5       | .0   | .0        | .0   | .0              | .0   | 1.5                     | .0             | .0        | 5.4         | 1.5                 | 1.0        | .0              | 90.6       |
| SE            | 1.9                | .0        | .0   | .0        | .0   | .0              | .0   | 1.9                     | 7.4            | .0        | 14.8        | 1.9                 | .0         | .0              | 74.1       |
| S             | 2.3                | .0        | .0   | .0        | .0   | .0              | .0   | 2.3                     | .0             | .0        | 2.3         | .0                  | 3.1        | .0              | 92.2       |
| SW            | .0                 | 1.2       | .0   | .0        | .0   | .0              | .0   | 1.2                     | .0             | .0        | 5.5         | .0                  | 5.0        | .0              | 90.2       |
| W             | 1.1                | .5        | .0   | .0        | .0   | .0              | .0   | 1.6                     | .0             | 1.1       | 1.6         | .0                  | 5.1        | .0              | 90.7       |
| NW            | .0                 | .0        | .3   | .0        | .0   | .0              | .0   | .3                      | .7             | .3        | 3.2         | .0                  | 4.3        | .0              | 91.2       |
| VAR           | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM          | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 9.6         | .0                  | .0         | .0              | 90.4       |
| TOT PCT       | .1                 | .1        | .2   | .0        | .0   | .0              | .0   | .4                      | .3             | .3        | 2.1         | *                   | 2.2        | *               | 94.7       |
| TOT OBS: 5139 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT)    | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |              |           |             |                     |            |                 |            |
|---------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|--------------|-----------|-------------|---------------------|------------|-----------------|------------|
|               | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZG PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 0000Z         | .2                 | .0        | .3   | .0        | .0   | .0              | .0   | .5                      | .0           | .8        | 1.7         | .0                  | 1.4        | .1              | 95.4       |
| 0600Z         | .1                 | .2        | .2   | .0        | .0   | .0              | .0   | .5                      | .0           | .5        | 2.5         | .0                  | 1.7        | .0              | 94.3       |
| 1200Z         | .0                 | .2        | .2   | .0        | .0   | .0              | .0   | .4                      | .0           | .0        | 2.3         | .1                  | 2.6        | .1              | 94.3       |
| 1800Z         | .1                 | .0        | .1   | .0        | .0   | .0              | .0   | .2                      | .1           | .1        | 2.0         | .0                  | 2.9        | .0              | 94.6       |
| TOT PCT       | .1                 | .1        | .2   | .0        | .0   | .0              | .0   | .3                      | .3           | .3        | 2.1         | *                   | 2.2        | *               | 94.6       |
| TOT OBS: 5208 |                    |           |      |           |      |                 |      |                         |              |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.1                | 19.0 | 25.1  | 2.7   | *     | .0  |      | 47.9      | 12.4     |          | 48.1       | 53.7  | 47.4  | 44.8  | 46.6  | 59.4  | 50.7  | 46.1  |
| NE       | .7                 | 12.4 | 24.1  | 3.5   | .1    | .0  |      | 40.8      | 13.6     |          | 39.7       | 31.0  | 41.8  | 44.8  | 42.5  | 32.8  | 38.2  | 41.5  |
| E        | .1                 | .6   | .5    | .1    | .0    | .0  |      | 1.3       | 10.6     |          | 1.1        | 2.1   | 1.3   | 1.4   | 1.5   | .4    | 1.0   | 1.4   |
| SE       | *                  | .1   | .1    | .0    | .0    | .0  |      | .3        | 8.3      |          | .2         | .0    | .3    | .1    | .4    | .0    | .3    | .1    |
| S        | .1                 | .3   | .1    | *     | .0    | .0  |      | .5        | 7.0      |          | .4         | .4    | .4    | .3    | .7    | .6    | .5    | .4    |
| SW       | .2                 | .5   | .1    | *     | .0    | .0  |      | .8        | 7.0      |          | 1.0        | 1.2   | .8    | .9    | 1.0   | .4    | .6    | .6    |
| W        | .3                 | 1.3  | .2    | *     | .0    | .0  |      | 1.8       | 6.4      |          | 2.0        | .8    | 1.4   | 1.5   | 1.5   | 1.1   | 2.1   | 2.3   |
| NW       | .4                 | 4.1  | 1.2   | .1    | .0    | .0  |      | 5.7       | 8.3      |          | 6.2        | 9.4   | 5.3   | 5.2   | 5.0   | 5.3   | 6.0   | 6.6   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |       |     |      | 1.0       | .0       |          | 1.3        | 1.5   | 1.3   | 1.1   | .7    | .0    | .7    | 1.1   |
| TOT OBS  | 394                | 3705 | 4964  | 619   | 15    | 0   | 9697 |           | 12.3     |          | 1909       | 130   | 1891  | 902   | 1962  | 131   | 1923  | 849   |
| TOT PCT  | 4.1                | 38.2 | 51.2  | 6.4   | .2    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 6.0  | 31.1               | 10.3  | .5    | .0       |      | 47.9         | 12.4        | 48.4        | 46.6       | 47.4     | 49.3     |  |
| NE       | 3.9  | 24.3               | 11.7  | .8    | .0       |      | 40.8         | 13.6        | 39.2        | 42.7       | 41.9     | 39.2     |  |
| E        | .4   | .6                 | .3    | *     | .0       |      | 1.3          | 10.6        | 1.1         | 1.4        | 1.4      | 1.1      |  |
| SE       | .1   | .1                 | *     | *     | .0       |      | .3           | 8.3         | .2          | .2         | .4       | .3       |  |
| S        | .3   | .2                 | *     | *     | .0       |      | .5           | 7.0         | .4          | .4         | .7       | .4       |  |
| SW       | .5   | .2                 | .1    | *     | .0       |      | .8           | 7.0         | 1.0         | .8         | .9       | .6       |  |
| W        | 1.1  | .6                 | *     | .0    | .0       |      | 1.8          | 6.4         | 1.9         | 1.4        | 1.5      | 2.2      |  |
| NW       | 2.3  | 3.3                | .2    | .0    | .0       |      | 5.7          | 8.3         | 6.4         | 5.3        | 5.1      | 6.2      |  |
| VAR      | 1.0  | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 1.0  |                    |       |       |          |      | 1.0          | .0          | 1.3         | 1.2        | .7       | .8       |  |
| TOT OBS  | 1505 | 5867               | 2198  | 127   | 0        | 9697 |              | 12.3        | 2039        | 2793       | 2093     | 2772     |  |
| TOT PCT  | 15.5 | 60.5               | 22.7  | 1.3   | .0       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0003 CASABLANCA SW  
31.7N 13.2W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GHT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS)<br>11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-----------------------------|-------|-------|-----|------|----------|-----------|
| 00003 | 1.3  | 2.7 | 38.0 | 52.2                        | 5.6   | .1    | .0  | 12.3 | 100.0    | 2039      |
| 06009 | 1.2  | 3.5 | 40.5 | 48.7                        | 5.8   | .2    | .0  | 11.9 | 100.0    | 2793      |
| 12015 | .7   | 3.2 | 36.3 | 53.0                        | 6.6   | .2    | .0  | 12.6 | 100.0    | 2093      |
| 18021 | .8   | 2.7 | 37.4 | 51.6                        | 7.3   | .1    | .0  | 12.5 | 100.0    | 2772      |
| TOT   | 98   | 296 | 3705 | 4966                        | 619   | 13    | 0   | 12.3 |          | 9697      |
| PCT   | 1.0  | 3.1 | 38.2 | 51.2                        | 6.4   | .2    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-6  | TOTAL | MEAN CLOUD COVER |
|----------|------|------|------|------|-------|------------------|
| N        | 18.8 | 11.7 | 14.8 | 7.1  |       | 3.9              |
| NE       | 12.3 | 8.6  | 10.6 | 4.4  |       | 3.9              |
| E        | .2   | .2   | .2   | .2   |       | 4.3              |
| SE       | .1   | .1   | .1   | .1   |       | 4.8              |
| S        | .3   | .1   | .2   | .1   |       | 3.5              |
| SW       | .2   | .3   | .2   | .1   |       | 3.6              |
| W        | 1.0  | .5   | .2   | .2   |       | 2.7              |
| NW       | 2.8  | 1.0  | 1.4  | 1.0  |       | 3.6              |
| VAR      | .0   | .0   | .0   | .0   |       | .0               |
| CALM     | .6   | .1   | .1   | .1   |       | 2.3              |
| TOT OBS  | 1575 | 978  | 1215 | 577  | 4345  | 3.8              |
| TOT PCT  | 36.2 | 22.5 | 28.0 | 13.3 | 100.0 |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|----------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT  | OBS   |
| .1  | .1  | .4  | 2.1 | 7.3  | 6.1  | 2.5  | .6   | .3   | .4    | 32.6     |       |
| .1  | .3  | 1.4 | 4.7 | 4.1  | 1.8  | .5   | .1   | .3   | .3    | 22.8     |       |
| .0  | .0  | .0  | .0  | .1   | .1   | .1   | .1   | .1   | .1    | .5       |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | .2       |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | .5       |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | .5       |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | 1.5      |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | 4.0      |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | .0       |       |
| .0  | .0  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | .7       |       |
| .5  | 6   | 32  | 163 | 576  | 486  | 211  | 60   | 19   | 36    | 2791     | 4345  |
| .1  | .1  | .7  | 3.8 | 13.3 | 11.2 | 4.9  | 1.4  | .4   | .8    | 63.3     | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM)<br>= OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|----------------------|-----------|-----------|------------|---------|
| = OR >6500     | 1.1      | 1.3     | 1.3     | 1.3                  | 1.3       | 1.3       | 1.3        | 1.3     |
| = OR >5000     | 2.2      | 2.6     | 2.6     | 2.6                  | 2.6       | 2.6       | 2.6        | 2.6     |
| = OR >3500     | 6.3      | 7.3     | 7.4     | 7.5                  | 7.5       | 7.5       | 7.5        | 7.5     |
| = OR >2000     | 16.0     | 18.4    | 18.6    | 18.7                 | 18.7      | 18.7      | 18.7       | 18.7    |
| = OR >1000     | 26.8     | 31.4    | 31.8    | 31.9                 | 31.9      | 31.9      | 31.9       | 31.9    |
| = OR >600      | 29.5     | 35.1    | 35.5    | 35.7                 | 35.7      | 35.7      | 35.7       | 35.7    |
| = OR >300      | 29.8     | 35.7    | 36.3    | 36.4                 | 36.4      | 36.4      | 36.4       | 36.4    |
| = OR >150      | 29.9     | 35.8    | 36.4    | 36.5                 | 36.5      | 36.5      | 36.5       | 36.5    |
| = OR >0        | 29.9     | 35.8    | 36.5    | 36.6                 | 36.7      | 36.7      | 36.7       | 36.7    |
| TOTAL          | 1311     | 1570    | 1599    | 1605                 | 1606      | 1606      | 1607       | 1607    |

TOTAL NUMBER OF OBS: 4381

PCT FREQ NH < 5/8: 63.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8    | TOTAL |
|------|------|------|------|-----|-----|-----|-----|------|-------|
| 16.8 | 10.6 | 13.5 | 12.8 | 9.5 | 6.9 | 8.8 | 9.2 | 11.9 | OBS   |
| .1   |      |      |      |     |     |     |     |      | 4564  |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0003 CASABLANCA SW  
31.7N 13.2W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | *    | .0  | .0 | .0 | .0 | .0  | *   | .0  | .0   | .1    |              |
|              | TOT %  | .1   | *    | .0  | .0 | .0 | .0 | .0  | *   | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | *   | .0  | .0  | .0   | *     |              |
|              | NO PCP | .3   | .3   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .6    |              |
|              | TOT %  | .3   | .3   | .0  | .0 | .0 | .0 | *   | .0  | .0  | .0   | .6    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | .1   | .0  | .0 | .0 | .0 | *   | .1  | .0  | .0   | .5    |              |
|              | TOT %  | .2   | .1   | .0  | .0 | .0 | .0 | *   | .1  | .0  | .0   | .5    |              |
| 2<5          | PCP    | *    | .0   | .0  | *  | *  | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .7   | .5   | .1  | .1 | .1 | .1 | *   | .2  | .0  | .1   | 1.7   |              |
|              | TOT %  | .7   | .5   | .1  | .1 | .1 | .1 | *   | .2  | .0  | .1   | 1.7   |              |
| 5<10         | PCP    | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
|              | NO PCP | 10.9 | 7.9  | .2  | *  | .1 | .1 | .4  | 1.2 | .0  | .3   | 21.1  |              |
|              | TOT %  | 11.0 | 7.9  | .2  | *  | .1 | .1 | .4  | 1.2 | .0  | .3   | 21.2  |              |
| 10+          | PCP    | .1   | *    | *   | .0 | .0 | *  | *   | *   | .0  | .0   | .2    |              |
|              | NO PCP | 39.8 | 27.3 | .7  | .2 | .4 | .6 | 1.3 | 4.6 | .0  | .7   | 75.7  |              |
|              | TOT %  | 39.9 | 27.4 | .7  | .2 | .4 | .6 | 1.3 | 4.6 | .0  | .7   | 75.9  |              |
| TOT OBS      |        | 5129 |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |        | 52.2 | 36.2 | 1.0 | .3 | .6 | .8 | 1.8 | 6.1 | .0  | 1.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E  | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .1    |              |
|              | 11-21      | *    | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | *    | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | *   | .0  | .0  | .0   | *     |              |
|              | 4-10       | .1   | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .1   | .2   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .3    |              |
|              | 22+        | *    | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | .2   | .2   | .0 | .0 | .0 | .0 | *   | .0  | .0  | .0   | .4    |              |
| 1<2          | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0 | .0 | .0 | .0 | *   | *   | .0  | .0   | .1    |              |
|              | 11-21      | .1   | .1   | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .3    |              |
|              | 22+        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .2   | .1   | .0 | .0 | .0 | .0 | *   | .1  | .0  | .0   | .3    |              |
| 2<5          | 0-3        | .1   | .0   | .0 | .0 | *  | *  | .0  | *   | .0  | .0   | .2    |              |
|              | 4-10       | .4   | .3   | *  | *  | *  | *  | *   | .1  | .0  | .0   | .9    |              |
|              | 11-21      | .4   | .2   | *  | *  | *  | *  | .0  | *   | .0  | .0   | .7    |              |
|              | 22+        | *    | *    | .0 | .0 | .0 | .0 | .0  | *   | .0  | .0   | .1    |              |
|              | TOT %      | .9   | .5   | *  | *  | .1 | .1 | *   | .2  | .0  | *    | 1.8   |              |
| 5<10         | 0-3        | .2   | .1   | *  | *  | *  | *  | *   | .1  | .0  | .2   | .7    |              |
|              | 4-10       | 3.9  | 2.5  | .1 | *  | *  | .1 | .3  | .8  | .0  | .0   | 7.7   |              |
|              | 11-21      | 5.7  | 4.7  | .1 | .0 | *  | *  | *   | .2  | .0  | .0   | 10.7  |              |
|              | 22+        | .8   | .8   | *  | .0 | .0 | .0 | .0  | *   | .0  | .0   | 1.6   |              |
|              | TOT %      | 10.6 | 8.1  | .2 | *  | .1 | .1 | .3  | 1.1 | .0  | .2   | 20.8  |              |
| 10+          | 0-3        | .7   | .5   | .1 | *  | .1 | .1 | .2  | .3  | .0  | .7   | 2.7   |              |
|              | 4-10       | 14.6 | 8.3  | .3 | .1 | .3 | .3 | .9  | 3.2 | .0  | .0   | 28.2  |              |
|              | 11-21      | 21.3 | 18.6 | .3 | .1 | .1 | .1 | .2  | .9  | .0  | .0   | 41.4  |              |
|              | 22+        | 2.0  | 2.2  | *  | .0 | .0 | .0 | *   | *   | .0  | .0   | 4.2   |              |
|              | TOT %      | 38.5 | 29.6 | .7 | .2 | .4 | .6 | 1.3 | 4.5 | .0  | .7   | 76.5  |              |
| TOT OBS      |            | 7163 |      |    |    |    |    |     |     |     |      |       |              |
| TOT PCT      |            | 50.4 | 38.5 | .9 | .3 | .6 | .7 | 1.7 | 5.8 | .0  | 1.0  | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0003 CASABLANCA SW  
31.7N 13.2W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .1         | .0         | .6         | 3.8        | 11.3         | 9.8          | 4.7          | 1.4          | .3           | 1.0   | 32.8  | 67.2               | 1093         |
| 06009         | .3         | .2         | 1.2        | 5.4        | 20.3         | 15.8         | 5.9          | 1.9          | .3           | .7    | 52.0  | 48.0               | 1101         |
| 12015         | .2         | .3         | .4         | 3.3        | 10.4         | 9.2          | 4.4          | 1.5          | .9           | .9    | 31.4  | 68.6               | 1165         |
| 18021         | .0         | .0         | .6         | 2.3        | 10.1         | 9.3          | 4.0          | .5           | .3           | .7    | 27.8  | 72.2               | 1134         |
| TOT           | 6          | 6          | 32         | 165        | 581          | 494          | 212          | 60           | 19           | 37    | 1612  | 2881               | 4493         |
| PCT           | .1         | .1         | .7         | 3.7        | 12.9         | 11.0         | 4.7          | 1.3          | .4           | .8    | 35.9  | 66.1               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .2    | .2  | 1.8 | 21.5 | 76.1 | 1650         |
| 06009         | .2   | .4    | .4  | 2.3 | 23.4 | 73.4 | 1967         |
| 12015         | .1   | .4    | .3  | 1.7 | 17.8 | 79.7 | 1668         |
| 18021         | .0   | .6    | .5  | 1.5 | 20.5 | 76.9 | 1949         |
| TOT           | 8    | 30    | 25  | 133 | 1512 | 5526 | 7234         |
| PCT           | .1   | .4    | .3  | 1.8 | 20.9 | 76.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .1            | .9         | 6.3         | 28.6            | 65.0              | 1058         |
| 06009         | .3            | 1.8        | 9.8         | 44.5            | 45.6              | 1080         |
| 12015         | .2            | 1.1        | 5.7         | 27.6            | 66.6              | 1136         |
| 18021         | .0            | .6         | 4.5         | 25.2            | 70.3              | 1107         |
| TOT           | 6             | 47         | 288         | 1377            | 2716              | 4381         |
| PCT           | .1            | 1.1        | 6.6         | 31.4            | 62.0              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | .0          |
| 80/84  | .0   | .0    | .0    | .1    | .5    | .3    | .0    | .1     | 42           | 1.0         |
| 75/79  | .0   | .0    | .0    | .4    | 2.3   | 6.5   | 3.7   | 1.0    | 591          | 13.9        |
| 70/74  | .0   | .0    | .0    | .2    | 4.8   | 21.8  | 32.9  | 14.8   | 3178         | 74.5        |
| 65/69  | .0   | .0    | .0    | .0    | .3    | 2.5   | 5.3   | 2.6    | 451          | 10.6        |
| TOTAL  | 0    | 0     | 1     | 28    | 338   | 1321  | 1788  | 787    | 4263         | 100.0       |
| PCT    | .0   | .0    | .0    | .7    | 7.9   | 31.0  | 41.9  | 18.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E  | SE | S  | SW | W   | NW  | VAR | CALM |
|------|------|----|----|----|----|-----|-----|-----|------|
| .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| .4   | .4   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 7.0  | 4.5  | .2 | .1 | .2 | .1 | .5  | 1.1 | .0  | .2   |
| 39.7 | 27.2 | .6 | .1 | .4 | .5 | 1.2 | 4.3 | .0  | .7   |
| 5.4  | 4.3  | .1 | .0 | .0 | .1 | .1  | .5  | .0  | .0   |
| 52.4 | 36.4 | .9 | .2 | .6 | .7 | 1.8 | 6.0 | .0  | .9   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 81  | 75  | 73  | 71  | 68 | 66 | 59  | 70.8 | 2042         |
| 06009         | 84  | 77  | 75  | 71  | 68 | 66 | 60  | 71.0 | 2785         |
| 12015         | 87  | 82  | 79  | 74  | 70 | 68 | 59  | 74.2 | 2037         |
| 18021         | 85  | 81  | 78  | 73  | 69 | 68 | 59  | 73.3 | 2710         |
| TOT           | 87  | 81  | 77  | 72  | 68 | 67 | 59  | 72.3 | 9574         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 3.2   | 25.1  | 45.3  | 26.4   | 84   | 1080         |
| 06009         | .0   | .3    | 4.7   | 23.0  | 47.9  | 24.0   | 83   | 1095         |
| 12015         | .0   | 2.0   | 13.8  | 39.7  | 34.6  | 10.0   | 78   | 1073         |
| 18021         | .0   | .5    | 9.8   | 36.3  | 40.0  | 13.4   | 80   | 1084         |
| TOT           | 0    | 29    | 340   | 1338  | 1810  | 795    | 81   | 4312         |



AUGUST

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973AREA 0003 CASABLANCA SW  
31.7N 13.2W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | 4     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .2       | *        | *        | 13    | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .2       | .3       | .1       | 34    | .0       | .7        |
| 7/8                | .0       | .0       | .0       | .1       | .4       | 1.0      | .3       | .0       | 83    | *        | 1.8       |
| 6                  | .0       | .0       | *        | .2       | .3       | .5       | *        | .0       | 149   | *        | 1.0       |
| 5                  | .0       | .0       | .0       | .3       | 1.7      | 1.2      | .1       | .0       | 149   | .2       | 2.0       |
| 4                  | .0       | .0       | .1       | .8       | 2.7      | .9       | *        | .0       | 209   | .1       | 4.4       |
| 3                  | .0       | .0       | .1       | 1.3      | 4.2      | .5       | *        | .0       | 279   | .3       | 5.8       |
| 2                  | .0       | .0       | .3       | 3.2      | 6.5      | .5       | *        | .0       | 481   | .3       | 10.1      |
| 1                  | .0       | .0       | .2       | 8.2      | 7.9      | *        | .0       | .0       | 750   | .3       | 16.0      |
| 0                  | .0       | *        | .6       | 15.7     | 6.3      | .2       | *        | .0       | 1046  | .5       | 22.2      |
| -1                 | .0       | .0       | .5       | 13.3     | 1.8      | *        | *        | .0       | 719   | .2       | 15.4      |
| -2                 | .0       | .0       | .8       | 7.2      | 1.0      | .1       | *        | .0       | 414   | .1       | 8.9       |
| -3                 | .0       | .0       | .4       | 2.9      | .4       | .0       | .0       | .0       | 171   | .1       | 3.6       |
| -4                 | .0       | *        | .5       | 1.6      | .3       | *        | .0       | .0       | 109   | .0       | 2.4       |
| -5                 | .0       | .0       | .3       | .6       | .2       | .0       | .0       | .0       | 46    | .0       | 1.0       |
| -6                 | .0       | *        | .1       | .2       | .0       | .0       | .0       | .0       | 18    | .0       | .4        |
| -7/-8              | *        | *        | *        | .2       | .0       | .0       | .0       | .0       | 13    | .0       | .3        |
| -9/-10             | .0       | .0       | *        | .1       | .0       | .0       | .0       | .0       | 5     | .0       | .1        |
| -11/-13            | .1       | *        | *        | *        | .0       | .0       | .0       | .0       | 9     | .0       | .2        |
| TOTAL              | 5        |          | 179      |          | 1551     |          | 42       |          | 4601  | 102      | 4499      |
| PCT                | .1       | .2       | 3.9      | 55.9     | 33.7     | 5.2      | .9       | .1       | 100.0 | 2.2      | 97.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |
| <1      | .6  | 1.9  | .2    | .0    | .0    | .0  | 2.7  | .1  | .7   | .1    | .0    | .0    | .0  | .9   |
| 1-2     | .4  | 9.1  | 4.8   | .0    | .0    | .0  | 14.4 | .1  | 4.5  | 4.0   | .0    | .0    | .0  | 8.6  |
| 3-4     | .1  | 5.7  | 12.1  | .3    | .0    | .0  | 18.2 | *   | 2.4  | 9.1   | .4    | .0    | .0  | 11.9 |
| 5-6     | *   | .9   | 8.8   | .9    | *     | .0  | 10.7 | .0  | .4   | 7.2   | .9    | .0    | .0  | 8.5  |
| 7       | .0  | .2   | 4.2   | 1.0   | *     | .0  | 5.5  | .0  | .2   | 2.6   | 1.1   | *     | .0  | 3.8  |
| 8-9     | .0  | *    | .8    | .5    | .0    | .0  | 1.4  | .0  | .0   | .4    | .6    | .0    | .0  | .9   |
| 10-11   | .0  | .0   | .5    | .3    | .0    | .0  | .7   | .0  | .0   | .2    | .1    | .0    | .0  | .3   |
| 12      | .0  | .0   | .1    | .3    | .0    | .0  | .4   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 17.9 | 31.6  | 3.4   | .1    | .0  | 54.0 | .3  | 8.1  | 23.7  | 3.1   | *     | .0  | 35.3 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .1  | *    | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .2   | .0    | .0    | .0    | .0  | .2  | *   | *    | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | *    | .1    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .4   | .3    | .0    | .0    | .0  | .7  | *   | .1   | .1    | .0    | .0    | .0  | .3  |

PERIOD: (OVER-ALL) 1963-1973

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31.7N 13.2W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .1  | *    | .0    | .0    | .0    | .0  |  | .1  | .1  | *    | .0    | .0    | .0    | .0  |  | .2  |
| 1-2     | .1  | .2   | .0    | .0    | .0    | .0  |  | .3  | .1  | .2   | *     | .0    | .0    | .0  |  | .3  |
| 3-4     | .0  | .0   | *     | .0    | .0    | .0  |  | *   | .0  | *    | *     | .0    | .0    | .0  |  | *   |
| 5-6     | .0  | .0   | *     | .0    | .0    | .0  |  | *   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  |  | *   | .0  | .0   | *     | .0    | .0    | .0  |  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .1  | .3   | .1    | .0    | .0    | .0  |  | .5  | .2  | .2   | .1    | .0    | .0    | .0  |  | .5  |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | *   | .2   | .0    | .0    | .0    | .0  |  | .2  | .1  | .6   | *     | .0    | .0    | .0  |  | .7  |           |
| 1-2     | .1  | .7   | .1    | .0    | .0    | .0  |  | .8  | .3  | 3.1  | .3    | .0    | .0    | .0  |  | 3.7 |           |
| 3-4     | .0  | .2   | .1    | .0    | .0    | .0  |  | .3  | .0  | .7   | .7    | .0    | .0    | .0  |  | 1.4 |           |
| 5-6     | .0  | *    | .0    | .0    | .0    | .0  |  | *   | .0  | *    | .3    | *     | .0    | .0  |  | .4  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | *    | .0    | .0    | .0    | .0  |  | *   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | *    | *     | *     | .0    | .0  |  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .1  | 1.1  | .2    | .0    | .0    | .0  |  | 1.4 | .4  | 4.4  | 1.4   | .1    | .0    | .0  |  | 6.3 | 98.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.6 | 3.5  | .4    | .0    | .0    | .0  | 6.5   |         |
| 1-2     | 1.2 | 17.9 | 9.1   | .0    | .0    | .0  | 28.2  |         |
| 3-4     | .1  | 9.1  | 22.2  | .7    | .0    | .0  | 32.1  |         |
| 5-6     | *   | 1.4  | 16.4  | 1.8   | *     | .0  | 19.7  |         |
| 7       | .0  | .4   | 6.8   | 2.1   | *     | .0  | 9.4   |         |
| 8-9     | .0  | .1   | 1.2   | 1.1   | .0    | .0  | 2.3   |         |
| 10-11   | .0  | .0   | .7    | .4    | .0    | .0  | 1.1   |         |
| 12      | .0  | .0   | .2    | .4    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 3.9 | 32.5 | 57.1  | 6.5   | .1    | .0  | 100.0 | 2693    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .8  | 8.0  | 12.6 | 7.8  | 3.6  | .9  | .4    | .1  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1163  | 4        |
| 6-7          | .0  | 1.5  | 6.0  | 9.6  | 6.3  | 2.9 | 1.0   | .4  | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 948   | 5        |
| 8-9          | .0  | .7   | 2.1  | 3.4  | 3.7  | 1.7 | 1.1   | .4  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 432   | 6        |
| 10-11        | .0  | .6   | .7   | 1.0  | 1.1  | .6  | .3    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 153   | 6        |
| 12-13        | .0  | .0   | .5   | .6   | .4   | .2  | .1    | *   | .0    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 63    | 6        |
| 13-14        | .0  | .0   | .0   | .4   | .3   | .1  | *     | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 28    | 7        |
| 14-15        | .0  | .0   | .0   | .0   | .0   | .0  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 598   | 4        |
| INDET        | 1.0 | 3.8  | 5.4  | 3.7  | 2.1  | 1.0 | .5    | *   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3405  | 5        |
| TOTAL        | 62  | 493  | 928  | 902  | 591  | 250 | 122   | 39  | 13    | 1     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3405  |          |
| PCT          | 1.8 | 14.5 | 27.3 | 26.5 | 17.4 | 7.3 | 3.6   | 1.1 | .4    | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

SEPTEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | .5        | .2   | .0        | .0   | .0              | .0   | .9                      | .6             | .3        | .6          | .0                  | 1.7        | .0              | 95.9       |
| NE       | .2                 | *         | .2   | .0        | .0   | .0              | .0   | .5                      | .5             | .5        | .5          | .0                  | 1.6        | .0              | 96.5       |
| E        | .5                 | .8        | 2.2  | .0        | .0   | .0              | .0   | 3.5                     | 1.1            | 1.9       | 1.3         | .0                  | .5         | .0              | 91.7       |
| SE       | 1.5                | .8        | .0   | .0        | .0   | .0              | .0   | 2.3                     | .0             | 2.3       | 2.3         | .0                  | .0         | .0              | 94.7       |
| S        | 3.0                | 1.2       | .9   | .0        | .0   | .0              | .0   | 5.2                     | .0             | 1.8       | 1.8         | .0                  | .0         | .0              | 93.0       |
| SW       | .5                 | 2.9       | .1   | .0        | .0   | .0              | .0   | 3.6                     | 1.6            | .7        | 1.1         | .0                  | 1.2        | .0              | 92.0       |
| W        | 1.3                | 1.6       | 1.7  | .0        | .0   | .0              | .0   | 4.1                     | 1.6            | .3        | .7          | .0                  | 1.0        | .0              | 92.3       |
| NW       | .1                 | 1.3       | .6   | .0        | .0   | .0              | .0   | 1.9                     | 1.2            | .9        | 1.7         | .2                  | .9         | .0              | 93.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | 1.0            | 1.0       | 3.9         | .0                  | 1.9        | .0              | 92.2       |
| TOT PCT  | .3                 | .6        | .4   | .0        | .0   | .0              | .0   | 1.2                     | .7             | .5        | .8          | *                   | 1.5        | .0              | 95.3       |
| TOT OBS: | 4658               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 0003       | .2                 | .3        | .4   | .0        | .0   | .0              | .0   | .8                      | .7             | 1.0       | .9          | .1                  | 1.3        | .0              | 95.2       |
| 0609       | .3                 | .6        | .2   | .0        | .0   | .0              | .0   | 1.2                     | .8             | .8        | 1.1         | .0                  | 1.2        | .0              | 94.9       |
| 12015      | .6                 | .5        | .5   | .0        | .0   | .0              | .0   | 1.5                     | .6             | .1        | .4          | .0                  | 1.8        | .0              | 95.7       |
| 18021      | .2                 | .7        | .4   | .0        | .0   | .0              | .0   | 1.3                     | .7             | .2        | 1.4         | .0                  | 1.7        | .0              | 94.7       |
| TOT PCT    | .3                 | .5        | .4   | .0        | .0   | .0              | .0   | 1.2                     | .7             | .5        | 1.0         | *                   | 1.5        | .0              | 95.1       |
| TOT OBS:   | 4821               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.8                | 18.4 | 15.8  | 1.3   | *     | .0  |      | 37.4      | 10.9     |          | 37.4       | 39.9  | 37.9  | 36.1  | 36.7  | 33.3  | 39.5  | 34.7  |
| NE       | 1.4                | 15.5 | 16.6  | 1.9   | *     | .0  |      | 35.4      | 11.8     |          | 34.8       | 35.3  | 36.3  | 35.0  | 37.3  | 37.3  | 34.0  | 34.0  |
| E        | .3                 | 1.6  | .6    | *     | .0    | .0  |      | 2.5       | 8.2      |          | 2.8        | 1.8   | 2.5   | 3.4   | 2.2   | 2.4   | 2.1   | 2.6   |
| SE       | .2                 | .5   | .1    | *     | .0    | .0  |      | .8        | 6.0      |          | .7         | .0    | .7    | 1.0   | 1.1   | .2    | .8    | .6    |
| S        | .4                 | 1.1  | .3    | .1    | .0    | .0  |      | 1.8       | 7.5      |          | 1.8        | 3.1   | 1.8   | 1.5   | 2.2   | 1.8   | 1.7   | 1.4   |
| SW       | 1.0                | 2.4  | 1.0   | .2    | .0    | .0  |      | 4.5       | 8.3      |          | 4.6        | 1.5   | 3.3   | 4.6   | 4.7   | 6.2   | 5.2   | 5.5   |
| W        | 1.1                | 3.7  | .8    | *     | .0    | .0  |      | 5.6       | 7.0      |          | 6.0        | 4.6   | 5.5   | 6.3   | 5.3   | 6.3   | 4.8   | 7.3   |
| NW       | 1.3                | 6.6  | 1.4   | *     | .0    | .0  |      | 9.3       | 7.4      |          | 9.1        | 11.6  | 9.5   | 9.1   | 7.9   | 10.9  | 9.7   | 11.6  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.6                |      |       |       |       |     |      | 2.6       | .0       |          | 2.9        | 2.1   | 2.5   | 3.0   | 2.6   | 1.6   | 2.2   | 2.2   |
| TOT OBS  | 913                | 4517 | 3317  | 323   | 5     | 0   | 9075 |           | 10.1     |          | 1762       | 97    | 1774  | 839   | 1867  | 126   | 1794  | 816   |
| TOT PCT  | 10.1               | 49.8 | 36.6  | 3.6   | .1    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 8.6                | 22.4 | 6.2   | .2    | .0  |           | 37.4     | 10.9     | 37.5       | 37.3  | 36.5  | 38.0  |    |
| NE       | 6.6                | 21.2 | 7.2   | .4    | .0  |           | 35.4     | 11.8     | 34.8       | 35.9  | 37.3  | 34.0  |    |
| E        | 1.1                | 1.2  | .2    | .0    | .0  |           | 2.5      | 8.2      | 2.8        | 2.8   | 2.2   | 2.3   |    |
| SE       | .6                 | .2   | *     | *     | .0  |           | .8       | 6.0      | .7         | .8    | 1.1   | .7    |    |
| S        | 1.1                | .6   | .1    | *     | .0  |           | 1.8      | 7.5      | 1.8        | 1.7   | 2.2   | 1.6   |    |
| SW       | 2.2                | 1.8  | .5    | .1    | .0  |           | 4.5      | 8.3      | 4.6        | 3.7   | 4.8   | 5.3   |    |
| W        | 2.9                | 2.6  | .1    | .0    | .0  |           | 5.6      | 7.0      | 6.0        | 5.8   | 5.4   | 5.6   |    |
| NW       | 4.5                | 4.6  | .3    | *     | .0  |           | 9.3      | 7.4      | 9.3        | 9.4   | 8.1   | 10.3  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.6                |      |       |       |     |           | 2.6      | .0       | 2.9        | 2.7   | 2.6   | 2.2   |    |
| TOT OBS  | 2745               | 4948 | 1321  | 61    | 0   | 9075      |          | 10.1     | 1859       | 2613  | 1993  | 2610  |    |
| TOT PCT  | 30.2               | 54.5 | 14.6  | .7    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



SEPTEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+   | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-------|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |       |       |          |           |
| 00003 | 2.9  | 8.1 | 48.8 | 36.4               | 3.8   | .1    | .0 | 10.2  | 100.0 | 1859     |           |
| 06009 | 2.7  | 8.0 | 50.1 | 35.9               | 3.3   | *     | .0 | 9.9   | 100.0 | 2613     |           |
| 12015 | 2.6  | 5.9 | 50.5 | 37.4               | 3.5   | .1    | .0 | 10.2  | 100.0 | 1993     |           |
| 18021 | 2.2  | 7.8 | 49.5 | 36.7               | 3.7   | .1    | .0 | 10.1  | 100.0 | 2610     |           |
| TOT   | 232  | 681 | 4517 | 3317               | 323   | 5     | 0  | 10.1  |       | 9075     |           |
| PCT   | 2.6  | 7.5 | 49.8 | 36.6               | 3.6   | .1    | .0 | 100.0 |       |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 16.2 | 10.5 | 11.1 | 2.9          |              | 3.5                    |
| NE       | 13.0 | 10.2 | 10.0 | 2.8          |              | 3.6                    |
| E        | .5   | .4   | .6   | .1           |              | 4.0                    |
| SE       | .1   | .1   | .3   | .1           |              | 4.7                    |
| S        | .5   | .4   | .6   | .2           |              | 4.1                    |
| SW       | 1.1  | 1.1  | 1.3  | .5           |              | 4.2                    |
| W        | 1.9  | 1.1  | 1.2  | .3           |              | 3.4                    |
| NW       | 3.8  | 2.6  | 1.7  | .6           |              | 3.3                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.1  | .6   | .5   | .2           |              | 3.0                    |
| TOT OBS  | 1511 | 1063 | 1081 | 301          | 3956         | 3.5                    |
| TOT PCT  | 38.2 | 26.9 | 27.3 | 7.6          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| *          | *          | .1         | 1.6        | 4.1          | 2.7          | 1.3          | .5           | .1           | .3    | 29.7               |              |
| .0         | *          | .1         | 1.3        | 3.6          | 2.7          | 1.7          | .3           | .2           | .1    | 25.8               |              |
| *          | .0         | *          | .0         | .1           | .1           | .1           | .0           | .0           | *     | 1.2                |              |
| *          | .0         | .0         | *          | .1           | .1           | *            | *            | .1           | .0    | .3                 |              |
| *          | .1         | .0         | .0         | .2           | .1           | .1           | *            | *            | *     | 1.2                |              |
| *          | .0         | *          | .1         | .4           | .3           | .2           | *            | .0           | .0    | 3.1                |              |
| .0         | *          | *          | .2         | .2           | .3           | .2           | *            | .0           | .1    | 3.5                |              |
| *          | *          | *          | .2         | .6           | .6           | .1           | *            | .0           | .1    | 6.9                |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| *          | .0         | .1         | .1         | .2           | .1           | .1           | .0           | *            | .0    | 1.7                |              |
| *          | 7          | 13         | 135        | 380          | 283          | 150          | 38           | 18           | 24    | 2901               | 3956         |
| .1         | .2         | .4         | 3.4        | 9.6          | 7.2          | 3.8          | 1.0          | .5           | .6    | 73.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      | OR   |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| * OR >6500        | .7        | 1.0  | 1.1  | 1.1  | 1.1  | 1.1  | 1.1   | 1.1  |
| * OR >5000        | 1.6       | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  |
| * OR >3500        | 4.9       | 5.7  | 5.9  | 5.9  | 5.9  | 5.9  | 5.9   | 5.9  |
| * OR >2000        | 10.6      | 12.6 | 12.9 | 12.9 | 12.9 | 12.9 | 12.9  | 12.9 |
| * OR >1000        | 18.8      | 22.0 | 22.4 | 22.4 | 22.4 | 22.4 | 22.4  | 22.4 |
| * OR >600         | 21.8      | 25.3 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9  | 25.9 |
| * OR >300         | 22.0      | 25.6 | 26.2 | 26.2 | 26.2 | 26.2 | 26.2  | 26.2 |
| * OR >150         | 22.1      | 25.8 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4  | 26.4 |
| * OR >0           | 22.1      | 25.8 | 26.5 | 26.5 | 26.5 | 26.5 | 26.6  | 26.6 |
| TOTAL             | 896       | 1044 | 1073 | 1074 | 1075 | 1075 | 1077  | 1077 |

TOTAL NUMBER OF OBS: 4054

PCT FREQ NH <5/8: 73.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|------|------|------|-----|-----|-----|-----|-------|--------------|
| 14.2 | 15.8 | 17.4 | 15.7 | 10.1 | 7.1 | 7.3 | 6.1 | 6.1 | .2    | 4235         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

SEPTEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N         | NE     | E      | SE     | S       | SW      | W      | NW      | VAR       | CALM  | PCT   | TOTAL<br>OBS |
|--------------|--------|-----------|--------|--------|--------|---------|---------|--------|---------|-----------|-------|-------|--------------|
| <1/2         | PCP    | .0        | .0     | .0     | .0     | .0      | .0      | .0     | .0      | .0        | .0    | .0    | .0           |
|              | NO PCP | * * *     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | .1           |
|              | TOT %  | * * *     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | .1           |
| 1/2<1        | PCP    | .0        | .0     | .0     | .0     | .0      | .0      | .0     | .0      | .0        | .0    | .0    | .0           |
|              | NO PCP | * .1      | * .0   | * .0   | * .0   | * .0    | * .0    | * .1   | * .0    | * .0      | * .0  | * .0  | .3           |
|              | TOT %  | * .1      | * .0   | * .0   | * .0   | * .0    | * .0    | * .1   | * .0    | * .0      | * .0  | * .0  | .3           |
| 1<2          | PCP    | .0        | .0     | .0     | .0     | .0      | .0      | .0     | .0      | .0        | .0    | .0    | .0           |
|              | NO PCP | .2 .2     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | .5           |
|              | TOT %  | .2 .2     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | .5           |
| 2<5          | PCP    | * * *     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | .1           |
|              | NO PCP | .4 .3     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | 1.0          |
|              | TOT %  | .5 .3     | * * *  | * * *  | * * *  | * * *   | * * *   | * * *  | * * *   | * * *     | * * * | * * * | 1.1          |
| 5<10         | PCP    | .1        | * .1   | * .2   | * .1   | * .1    | * .1    | * .1   | * .0    | * .0      | * .0  | * .0  | .5           |
|              | NO PCP | 5.5 4.9   | * .5   | * .2   | * .3   | * .6    | * .9    | * 1.1  | * .0    | * .0      | * .0  | * .0  | 14.1         |
|              | TOT %  | 5.7 4.9   | * .6   | * .2   | * .3   | * .7    | * 1.0   | * 1.2  | * .0    | * .0      | * .0  | * .0  | 14.6         |
| 10+          | PCP    | .2        | * .1   | * .1   | * .1   | * .1    | * .1    | * .1   | * .0    | * .0      | * .0  | * .0  | .6           |
|              | NO PCP | 33.3 30.2 | 1.4 .5 | 1.4 .5 | 1.4 .5 | 3.3 3.8 | 3.8 7.2 | 7.2 .0 | 1.9 1.9 | 82.8 83.3 |       |       |              |
|              | TOT %  | 33.5 30.3 | 1.4 .5 | 1.4 .5 | 1.4 .5 | 3.3 3.8 | 3.8 7.3 | 7.3 .0 | 1.9 1.9 | 83.3 83.3 |       |       |              |
| TOT OBS      |        |           |        |        |        |         |         |        |         |           |       |       | 4652         |
| TOT PCT      |        | 39.9      | 35.8   | 2.0    | .7     | 1.8     | 4.1     | 4.8    | 8.7     | .0        | 2.2   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N         | NE     | E     | SE    | S     | SW    | W     | NW    | VAR   | CALM  | PCT   | TOTAL<br>OBS |
|--------------|------------|-----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| <1/2         | 0-3        | .0        | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .0           |
|              | 4-10       | .0        | .0     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0           |
|              | 11-21      | * * *     | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .0           |
|              | 22+        | .0        | .0     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0           |
|              | TOT %      | * * *     | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1           |
| 1/2<1        | 0-3        | .0        | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .0           |
|              | 4-10       | * * *     | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1           |
|              | 11-21      | * .1      | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .1           |
|              | 22+        | * * *     | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .0           |
|              | TOT %      | * .1      | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .1  | * .0  | * .0  | * .0  | .2           |
| 1<2          | 0-3        | * * *     | * * *  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1           |
|              | 4-10       | .1 .1     | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .1           |
|              | 11-21      | * .1      | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .1           |
|              | 22+        | * .0      | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .0           |
|              | TOT %      | .2 .2     | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .4           |
| 2<5          | 0-3        | * .0      | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .2           |
|              | 4-10       | .1 .1     | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .4           |
|              | 11-21      | .2 .2     | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .5           |
|              | 22+        | * .0      | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .1           |
|              | TOT %      | .4 .4     | * .0   | * .0  | * .0  | * .0  | * .0  | * .0  | * .1  | * .0  | * .0  | * .0  | 1.2          |
| 5<10         | 0-3        | .2        | .2     | .1    | .1    | .1    | .1    | .1    | .1    | .0    | .2    | .1    | 1.1          |
|              | 4-10       | 2.2 2.1   | .3     | .1    | .2    | .3    | .5    | .7    | .0    | .0    | .0    | .0    | 6.4          |
|              | 11-21      | 2.5 2.4   | .1     | .0    | .1    | .2    | .1    | .2    | .0    | .0    | .0    | .0    | 5.6          |
|              | 22+        | .3 .3     | * .0   | * .0  | * .0  | * .1  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  | .7           |
|              | TOT %      | 5.2 4.9   | .5     | .1    | .4    | .6    | .8    | 1.0   | .0    | .2    | .0    | .0    | 13.8         |
| 10+          | 0-3        | 1.5 .8    | .2     | .1    | .2    | .7    | .7    | 1.2   | .0    | 2.0   | 7.4   |       |              |
|              | 4-10       | 15.9 13.3 | 1.1 .4 | .9    | 1.8   | 2.8   | 5.3   | .0    | .0    | .0    | .0    |       | 41.5         |
|              | 11-21      | 14.3 14.8 | .3     | .1    | .2    | .7    | .6    | 1.1   | .0    | .0    | .0    |       | 32.2         |
|              | 22+        | 1.2 1.9   | * .0   | * .0  | * .1  | * .0  | * .0  | * .0  | * .0  | * .0  | * .0  |       | 3.2          |
|              | TOT %      | 32.9 30.9 | 1.7    | .6    | 1.3   | 3.3   | 4.1   | 7.5   | .0    | 2.0   | 84.3  |       |              |
| TOT OBS      |            |           |        |       |       |       |       |       |       |       |       |       | 6679         |
| TOT PCT      |            | 38.7      | 36.5   | 2.3   | .8    | 1.8   | 3.9   | 4.9   | 8.8   | .0    | 2.3   | 100.0 |              |

SEPTEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .1         | .1         | .6         | 3.2        | 8.9          | 5.9          | 3.8          | .9           | .2           | .1    | 23.9  | 76.1                | 968          |
| 06009         | .3         | .4         | .1         | 4.3        | 12.7         | 7.9          | 4.9          | .7           | .9           | 1.1   | 33.2  | 66.8                | 1054         |
| 12015         | .2         | .0         | .6         | 2.4        | 7.1          | 7.2          | 3.4          | 1.3          | .2           | .6    | 22.9  | 77.1                | 1116         |
| 18021         | .1         | .2         | .2         | 3.4        | 8.4          | 6.4          | 2.9          | .8           | .5           | .7    | 23.5  | 76.5                | 1046         |
| TOT           | 7          | 7          | 16         | 139        | 387          | 287          | 157          | 38           | 18           | 27    | 1083  | 3101                | 4184         |
| PCT           | .2         | .2         | .4         | 3.3        | 9.2          | 6.9          | 3.8          | .9           | .4           | .6    | 25.9  | 74.1                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .3    | .3  | 1.7 | 13.9 | 83.7 | 1493         |
| 06009         | .1   | .1    | .4  | 1.4 | 16.9 | 81.1 | 1876         |
| 12015         | .2   | .1    | .4  | .9  | 11.4 | 86.9 | 1621         |
| 18021         | .2   | .4    | .5  | .7  | 13.7 | 84.5 | 1851         |
| TOT           | 7    | 16    | 28  | 81  | 963  | 5746 | 6841         |
| PCT           | .1   | .2    | .4  | 1.2 | 14.1 | 84.0 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .1            | .9         | 5.2         | 20.0            | 74.8               | 929          |
| 06009         | .2            | .7         | 6.3         | 28.1            | 65.6               | 1021         |
| 12015         | .2            | .9         | 4.6         | 19.8            | 75.6               | 1086         |
| 18021         | .1            | .5         | 4.5         | 19.8            | 75.6               | 1018         |
| TOT           | 6             | 30         | 208         | 890             | 2956               | 4054         |
| PCT           | .1            | .7         | 5.1         | 22.0            | 72.9               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | .0    | .1    | .3    | .3    | .1    | .1     | 38           | 1.0         |
| 75/79  | .0   | .0    | .0    | .5    | 2.4   | 6.2   | 3.3   | .7     | 502          | 13.0        |
| 70/74  | .0   | .0    | .0    | .7    | 8.7   | 27.5  | 28.2  | 10.6   | 2928         | 75.7        |
| 65/69  | .0   | .0    | .0    | .1    | 1.0   | 2.9   | 4.0   | 2.1    | 389          | 10.1        |
| 60/64  | .0   | .0    | .0    | .0    | *     | .1    | .1    | .1     | 12           | .3          |
| TOT    | 0    | 0     | 0     | 51    | 477   | 1436  | 1384  | 522    | 3870         | 100.0       |
| PCT    | .0   | .0    | .0    | 1.3   | 12.3  | 37.1  | 35.8  | 13.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|-----|-----|-----|-----|-----|------|
| .0   | .0   | .0  | .0 | .0  | .0  | *   | .0  | .0  | .0   |
| .4   | .3   | *   | *  | *   | *   | *   | .1  | .0  | .0   |
| 5.2  | 4.5  | .2  | .1 | .2  | .8  | .5  | 1.0 | .0  | .3   |
| 30.0 | 27.5 | 1.5 | .4 | 1.3 | 3.0 | 4.0 | 6.9 | .0  | 1.2  |
| 4.3  | 3.8  | .2  | *  | .1  | .3  | .3  | .7  | .0  | .4   |
| .1   | .1   | *   | *  | .0  | .1  | .1  | .0  | .0  | .0   |
| 39.9 | 36.1 | 2.0 | .6 | 1.7 | 4.1 | 4.9 | 8.7 | .0  | 1.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 78  | 75  | 74  | 71  | 68 | 66 | 61  | 71.1 | 1887         |
| 06009         | 82  | 77  | 75  | 71  | 68 | 65 | 61  | 71.2 | 2656         |
| 12015         | 86  | 82  | 79  | 74  | 70 | 68 | 60  | 74.4 | 1955         |
| 18021         | 84  | 81  | 78  | 73  | 70 | 66 | 60  | 73.3 | 2567         |
| TOT           | 86  | 81  | 77  | 72  | 68 | 66 | 60  | 72.4 | 9065         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .3    | 7.4   | 29.2  | 43.2  | 19.8   | 82   | 930          |
| 06009         | .0   | .5    | 8.5   | 32.4  | 40.7  | 17.9   | 81   | 1020         |
| 12015         | .0   | 2.5   | 18.8  | 45.2  | 26.2  | 7.2    | 76   | 1024         |
| 18021         | .0   | 1.7   | 13.8  | 41.3  | 33.6  | 9.6    | 78   | 1017         |
| TOT           | 0    | 51    | 489   | 1485  | 1427  | 539    | 79   | 3991         |



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AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .2       | 11    | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .1       | .1       | 16    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .1       | .3       | .5       | .2       | 47    | .0       | 1.1       |
| 6                  | .0       | .0       | .1       | .3       | .5       | .0       | .0       | 40    | .0       | .9        |
| 5                  | .0       | .0       | *        | .3       | 1.0      | .8       | .1       | 96    | .0       | 2.3       |
| 4                  | .0       | .0       | .1       | .7       | 1.7      | 1.1      | .0       | 155   | .1       | 3.6       |
| 3                  | .0       | .0       | .1       | .8       | 2.5      | .9       | .0       | 186   | .0       | 4.4       |
| 2                  | .0       | .0       | .2       | 2.0      | 5.8      | .8       | *        | 376   | .1       | 8.8       |
| 1                  | .0       | .0       | .5       | 4.2      | 7.4      | .3       | .0       | 524   | .2       | 12.2      |
| 0                  | .0       | .1       | .5       | 11.6     | 7.7      | .2       | .0       | 852   | .1       | 20.0      |
| -1                 | *        | *        | .7       | 15.0     | 4.5      | *        | *        | 857   | .3       | 19.9      |
| -2                 | .0       | .0       | .7       | 9.4      | 2.1      | *        | .0       | 517   | .2       | 12.0      |
| -3                 | .0       | *        | .6       | 5.0      | .7       | .0       | .0       | 268   | .0       | 6.3       |
| -4                 | .0       | *        | .4       | 2.5      | .5       | .0       | .0       | 146   | .0       | 3.4       |
| -5                 | .0       | *        | .4       | 1.1      | .1       | .0       | .0       | 68    | *        | 1.6       |
| -6                 | .0       | *        | .3       | .5       | .0       | .0       | .0       | 35    | *        | .8        |
| -7/-8              | .0       | .1       | .1       | .4       | *        | .0       | .0       | 27    | .0       | .6        |
| -9/-10             | .0       | .1       | .1       | *        | .0       | .0       | .0       | 12    | .0       | .3        |
| -11/-13            | .0       | *        | *        | .1       | .0       | .0       | .0       | 6     | .0       | .1        |
| TOTAL              | 1        |          | 203      | 1465     |          | 31       |          | 4243  | 39       | 4204      |
| PCT                | *        | .5       | 4.8      | 54.0     | 34.5     | 5.4      | .7       | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE   |      |       |       |       |     |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|------|-------|-------|-------|-----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     |
| <1      | .7  | 2.3  | .2    | .0    | .0    | .0  | 3.2  | .4  | 1.6  | *    | .0    | .0    | .0    | .0  | 2.0  | .7  |
| 1-2     | .3  | 10.5 | 3.0   | .0    | .0    | .0  | 13.8 | .4  | 7.4  | 2.9  | .0    | .0    | .0    | .0  | 10.7 | .3  |
| 3-4     | .1  | 4.8  | 8.0   | .7    | .0    | .0  | 13.6 | *   | 4.6  | 7.0  | .3    | .0    | .0    | .0  | 11.9 | .1  |
| 5-6     | .0  | .9   | 4.5   | .2    | .0    | .0  | 5.5  | .0  | .8   | 4.3  | .6    | .0    | .0    | .0  | 5.8  | .0  |
| 7       | .0  | .1   | 2.1   | .6    | .0    | .0  | 2.7  | .0  | .1   | 2.3  | .6    | .0    | .0    | .0  | 2.9  | .0  |
| 8-9     | .0  | .1   | .4    | .2    | .0    | .0  | .6   | .0  | .0   | .4   | .4    | .0    | .0    | .0  | .8   | .0  |
| 10-11   | .0  | .1   | .1    | .1    | .0    | .0  | .4   | .0  | *    | .1   | .1    | .0    | .0    | .0  | .2   | .0  |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | *    | .1   | .0    | .0    | .0    | .0  | .1   | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *    | *     | .0    | .0    | .0  | .0   | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   | .0  |
| TOT PCT | 1.1 | 18.8 | 18.2  | 1.8   | .0    | .0  | 39.9 | .8  | 14.5 | 17.1 | 2.2   | .0    | .0    | .0  | 34.5 | .7  |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .1  | .4   | .1    | .0    | .0    | .0  | .5  | .0  | .3  | .0   | .0    | .0    | .0    | .0  | .3 | .0  |
| 1-2     | *   | .8   | .1    | .0    | .0    | .0  | .8  | .1  | .2  | .1   | .0    | .0    | .0    | .0  | .3 | .0  |
| 3-4     | *   | .1   | .2    | .0    | .0    | .0  | .4  | .0  | .1  | .0   | .0    | .0    | .0    | .0  | .1 | .0  |
| 5-6     | .0  | .0   | *     | .0    | .0    | .0  | .1  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | *   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0  | *    | .0    | .0    | .0    | .0  | *  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .1  | 1.2  | .5    | *     | .0    | .0  | 1.9 | .1  | .6  | .1   | *     | .0    | .0    | .0  | .7 | .0  |

PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .4   | *     | .0    | .0    | .0  | .6  | .4 | .5  | .0   | .0    | .0    | .0    | .0  | .9  |
| 1-2     | *   | .6   | .1    | .0    | .0    | .0  | .7  | *  | 1.7 | .2   | .0    | .0    | .0    | .0  | 2.0 |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | *  | .3  | .4   | .1    | .0    | .0    | .0  | .8  |
| 5-6     | .0  | .1   | .1    | *     | .0    | .0  | .2  | .0 | .1  | .3   | .0    | .0    | .0    | .0  | .4  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0 | .0  | *    | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 1.2  | .4    | *     | .0    | .0  | 1.7 | .4 | 2.7 | .9   | .2    | .0    | .0    | .0  | 4.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | NW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .4  | .7   | .0    | .0    | .0    | .0  | 1.0 | .6 | 1.4 | *    | .0    | .0    | .0    | .0  | 2.0 |           |
| 1-2     | .3  | 2.2  | .2    | .0    | .0    | .0  | 2.7 | .3 | 3.6 | .6   | .0    | .0    | .0    | .0  | 4.5 |           |
| 3-4     | *   | .7   | .3    | .0    | .0    | .0  | 1.0 | *  | 1.3 | .6   | .0    | .0    | .0    | .0  | 1.9 |           |
| 5-6     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0 | .1  | .3   | .0    | .0    | .0    | .0  | .4  |           |
| 7       | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0 | *   | .1   | .0    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .7  | 3.7  | .8    | .0    | .0    | .0  | 5.2 | .9 | 6.4 | 1.5  | *     | .0    | .0    | .0  | 8.8 | 97.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.8 | 7.6  | .4    | .0    | .0    | .0  | 14.8  |         |
| 1-2     | 1.7 | 26.5 | 7.0   | .0    | .0    | .0  | 35.3  |         |
| 3-4     | .2  | 11.7 | 16.3  | 1.1   | .0    | .0  | 29.3  |         |
| 5-6     | .0  | 2.0  | 9.5   | .8    | .0    | .0  | 12.3  |         |
| 7       | .0  | .2   | 4.5   | 1.2   | .0    | .0  | 6.0   |         |
| 8-9     | .0  | .1   | .8    | .6    | .0    | .0  | 1.5   |         |
| 10-11   | .0  | .1   | .2    | .2    | .0    | .0  | .5    |         |
| 12      | .0  | .0   | *     | .2    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.7 | 48.3 | 38.7  | 4.2   | .0    | .0  | 100.0 | 2503    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |
|-----------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|
| <6              | 2.3 | 9.3  | 11.8 | 5.3  | 2.8  | .9  | .3    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1033  | 3           |
| 6-7             | .0  | 2.0  | 6.8  | 8.2  | 3.0  | 1.8 | 1.0   | .3  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 807   | 5           |
| 8-9             | .0  | .3   | 2.2  | 3.7  | 3.1  | 1.9 | 1.4   | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 413   | 6           |
| 10-11           | .0  | .6   | 1.2  | 1.1  | 1.4  | .7  | .4    | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 186   | 6           |
| 12-13           | .0  | .0   | 1.0  | 1.1  | .5   | .3  | .2    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 104   | 6           |
| >13             | .0  | .0   | .0   | .3   | .5   | .1  | .2    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 43    | 8           |
| INDET           | 3.1 | 3.3  | 4.5  | 3.7  | 1.7  | .8  | .5    | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 561   | 4           |
| TOTAL           | 168 | 487  | 867  | 740  | 473  | 206 | 124   | 51  | 30    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3147  | 5           |
| PCT             | 5.3 | 15.5 | 27.6 | 23.5 | 15.0 | 6.5 | 3.9   | 1.6 | 1.0   | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |             |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

OCTOBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | 1.1       | .2   | .0        | .0   | .0              | .0   | 1.5                     | 1.2            | .4        | .6       | .1                  | .3         | .1              | 95.8       |
| NE       | .1                 | .7        | .2   | .0        | .0   | .0              | .0   | 1.1                     | .7             | .5        | .5       | *                   | .5         | .0              | 96.7       |
| E        | 1.0                | .3        | 1.2  | .0        | .0   | .0              | .0   | 2.4                     | 1.5            | 2.3       | 1.0      | .8                  | .4         | .0              | 91.7       |
| SE       | 3.2                | 3.0       | 1.1  | .0        | .0   | .0              | .0   | 7.3                     | 4.5            | 2.3       | .7       | .0                  | .0         | .0              | 85.1       |
| S        | 2.6                | 2.8       | .6   | .0        | .0   | .0              | .0   | 6.0                     | 3.7            | 3.2       | .3       | .0                  | .3         | .0              | 87.1       |
| SW       | 4.2                | 2.4       | 1.1  | .0        | .0   | .0              | .0   | 7.7                     | 4.7            | 2.2       | .4       | .0                  | .6         | .0              | 84.6       |
| W        | 1.8                | 2.1       | .2   | .0        | .0   | .0              | .0   | 4.0                     | 4.2            | 2.4       | .6       | .0                  | .4         | .2              | 88.7       |
| NW       | 1.6                | 2.2       | .2   | .0        | .0   | .0              | .0   | 3.9                     | 4.1            | .1        | .6       | .0                  | .2         | *               | 91.0       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .6        | .0   | .0        | .0   | .0              | .0   | .6                      | .0             | .6        | 2.2      | .0                  | 1.1        | .0              | 95.5       |
| TOT PCT  | 1.0                | 1.4       | .4   | .0        | .0   | .0              | .0   | 2.7                     | 2.1            | 1.0       | .6       | .1                  | .4         | .1              | 93.1       |
| TOT OBS: | 5128               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | 1.3                | 1.4       | .4   | .0        | .0   | .0              | .0   | 3.1                     | 2.1            | 2.0       | .9       | .1                  | .5         | .0              | 91.4       |
| 06009      | 1.2                | 1.7       | .5   | .0        | .0   | .0              | .0   | 3.4                     | 2.0            | 1.8       | .2       | .2                  | .2         | .2              | 92.2       |
| 12015      | .6                 | 1.2       | .4   | .0        | .0   | .0              | .0   | 2.3                     | 2.1            | .1        | .7       | .0                  | .4         | .1              | 94.5       |
| 18021      | 1.1                | 1.1       | .2   | .0        | .0   | .0              | .0   | 2.4                     | 2.0            | .3        | .8       | .0                  | .4         | .0              | 94.1       |
| TOT PCT    | 1.1                | 1.4       | .4   | .0        | .0   | .0              | .0   | 2.8                     | 2.0            | 1.0       | .7       | .1                  | .4         | .1              | 93.1       |
| TOT OBS:   | 5318               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.5                | 13.2 | 9.6   | 1.2   | .1    | .0  |      | 25.5      | 10.7     |          | 26.8       | 26.8  | 23.9  | 25.5  | 23.6  | 26.5  | 27.7  | 25.7  |
| NE       | 1.2                | 14.5 | 12.9  | 2.0   | .1    | *   |      | 30.6      | 11.7     |          | 30.1       | 21.7  | 30.5  | 32.7  | 32.5  | 26.5  | 29.6  | 30.0  |
| E        | .8                 | 3.0  | 1.5   | .2    | *     | .0  |      | 5.5       | 9.0      |          | 5.4        | 9.0   | 5.9   | 6.1   | 5.3   | 4.0   | 4.9   | 5.9   |
| SE       | .4                 | 1.7  | .6    | .1    | .0    | .0  |      | 2.7       | 7.9      |          | 2.7        | 1.8   | 3.4   | 2.3   | 3.0   | 1.5   | 2.4   | 2.2   |
| S        | .6                 | 2.5  | 1.7   | .2    | *     | .0  |      | 5.1       | 10.0     |          | 5.8        | 8.3   | 4.5   | 4.7   | 5.6   | 6.8   | 4.9   | 4.0   |
| SW       | .8                 | 4.0  | 2.7   | .5    | *     | .0  |      | 7.9       | 10.6     |          | 8.2        | 5.1   | 8.4   | 7.3   | 7.8   | 7.6   | 8.1   | 7.7   |
| W        | 1.0                | 4.6  | 2.6   | .5    | .1    | .0  |      | 8.8       | 10.2     |          | 7.4        | 13.4  | 9.5   | 8.4   | 8.6   | 9.7   | 8.7   | 10.2  |
| NW       | .9                 | 6.3  | 2.7   | .5    | .1    | .0  |      | 10.5      | 9.8      |          | 9.6        | 11.6  | 9.7   | 10.9  | 10.4  | 14.4  | 11.5  | 11.4  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.2                |      |       |       |       |     |      | 3.2       | .0       |          | 4.1        | 2.2   | 4.2   | 2.1   | 3.0   | 3.0   | 2.3   | 2.7   |
| TOT OBS  | 996                | 4806 | 3311  | 504   | 42    | 2   | 9661 |           | 10.3     |          | 1904       | 136   | 1874  | 855   | 2024  | 132   | 1899  | 837   |
| TOT PCT  | 10.3               | 49.7 | 34.3  | 5.2   | .4    | *   |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |      |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|------|--|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |      |  |           |          |          | 00         | 03    | 09    | 15    | 18 |
| N        | 6.9                | 14.5 | 3.8   | .4    | .0  |      |  | 25.5      | 10.7     |          | 26.8       | 24.4  | 23.8  | 27.1  |    |
| NE       | 5.7                | 18.8 | 5.6   | .5    | *   |      |  | 30.6      | 11.7     |          | 29.6       | 31.2  | 32.1  | 29.7  |    |
| E        | 2.2                | 2.8  | .5    | .1    | .0  |      |  | 5.5       | 9.0      |          | 5.6        | 5.9   | 5.3   | 5.2   |    |
| SE       | 1.5                | 1.0  | .2    | *     | .0  |      |  | 2.7       | 7.9      |          | 2.6        | 3.1   | 2.9   | 2.3   |    |
| S        | 1.8                | 2.5  | .7    | .1    | *   |      |  | 5.1       | 10.0     |          | 5.9        | 4.5   | 5.7   | 4.6   |    |
| SW       | 2.7                | 3.7  | 1.4   | .1    | *   |      |  | 7.9       | 10.6     |          | 8.0        | 8.1   | 7.8   | 7.9   |    |
| W        | 3.0                | 4.4  | 1.0   | .3    | *   |      |  | 8.8       | 10.2     |          | 7.8        | 9.1   | 8.7   | 9.1   |    |
| NW       | 3.7                | 5.4  | 1.1   | .3    | .0  |      |  | 10.5      | 9.8      |          | 9.7        | 10.1  | 10.7  | 11.5  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |      |  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 3.2                |      |       |       |     |      |  | 3.2       | .0       |          | 4.0        | 3.6   | 3.0   | 2.4   |    |
| TOT OBS  | 2972               | 5129 | 1302  | 163   | 5   | 9661 |  |           | 10.3     |          | 2040       | 2729  | 2156  | 2736  |    |
| TOT PCT  | 30.8               | 53.1 | 14.4  | 1.7   | .1  |      |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

OCTOBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|----------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00003    | 4.0  | 6.9 | 31.9 | 31.8  | 5.0   | .4    | *   | 10.0  | 100.0    | 2040      |
| 06009    | 3.6  | 7.0 | 30.9 | 33.3  | 4.9   | .4    | *   | 10.0  | 100.0    | 2729      |
| 12015    | 3.0  | 7.0 | 48.3 | 35.6  | 5.5   | .6    | *   | 10.6  | 100.0    | 2156      |
| 18021    | 2.4  | 7.5 | 48.1 | 36.0  | 5.5   | .4    | *   | 10.5  | 100.0    | 2736      |
| TOT      | 311  | 685 | 4806 | 3311  | 504   | .2    | *   | 10.3  |          | 9661      |
| PCT      | 3.2  | 7.1 | 49.7 | 34.3  | 5.2   | .4    | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 9.9  | 8.4  | 7.5  | 1.5       |           | 3.5              |
| NE       | 10.6 | 8.3  | 9.1  | 1.7       |           | 3.6              |
| E        | 1.8  | 1.1  | 1.4  | .6        |           | 3.7              |
| SE       | .8   | .3   | .9   | .7        |           | 4.7              |
| S        | 1.3  | 1.3  | 2.3  | .9        |           | 4.6              |
| SW       | 1.7  | 1.8  | 2.5  | .9        |           | 4.4              |
| W        | 2.2  | 2.5  | 2.8  | .6        |           | 4.0              |
| NW       | 3.3  | 3.6  | 3.2  | .7        |           | 3.8              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | 1.9  | .6   | 1.0  | .3        |           | 3.0              |
| TOT OBS  | 1433 | 1192 | 1311 | 335       | 4271      | 3.7              |
| TOT PCT  | 33.6 | 27.9 | 30.7 | 7.8       | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| .0  | *   | .2  | .7  | 2.5  | 1.9  | .6   | .2   | .2   | .1    | 21.0            |           |
| *   | *   | *   | 1.0 | 2.7  | 2.5  | .9   | .4   | .1   | .2    | 21.8            |           |
| .0  | *   | *   | .3  | .5   | .2   | .2   | *    | *    | .1    | 3.5             |           |
| *   | .0  | *   | .2  | .4   | .2   | .1   | .1   | *    | *     | 1.6             |           |
| .0  | *   | .1  | .3  | .5   | .6   | .3   | .1   | .1   | .1    | 3.8             |           |
| .0  | .0  | .1  | .6  | .8   | .5   | .3   | .2   | .0   | *     | 4.5             |           |
| .0  | .0  | .1  | .9  | .9   | .6   | .1   | .1   | *    | *     | 5.8             |           |
| .0  | *   | *   | .3  | .9   | .6   | .3   | *    | .1   | .2    | 8.3             |           |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| .1  | .0  | *   | .1  | .2   | .2   | .0   | .0   | *    | *     | 3.1             |           |
| 5   | 7   | 27  | 158 | 402  | 315  | 122  | 47   | 22   | 37    | 3129            | 4271      |
| .1  | .2  | .6  | 3.7 | 9.4  | 7.4  | 2.9  | 1.1  | .5   | .9    | 73.3            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM) = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|-------------------|-----------|-----------|------------|---------|
| = OR >6500     | 1.2      | 1.4     | 1.4     | 1.4               | 1.4       | 1.4       | 1.4        | 1.4     |
| = OR >5000     | 2.0      | 2.4     | 2.5     | 2.5               | 2.5       | 2.5       | 2.5        | 2.5     |
| = OR >3500     | 4.6      | 5.3     | 5.3     | 5.3               | 5.3       | 5.4       | 5.4        | 5.4     |
| = OR >2000     | 10.7     | 12.7    | 12.8    | 12.8              | 12.8      | 12.8      | 12.8       | 12.8    |
| = OR >1000     | 18.3     | 21.5    | 21.9    | 22.0              | 22.0      | 22.0      | 22.0       | 22.0    |
| = OR >600      | 21.2     | 25.0    | 25.6    | 25.7              | 25.7      | 25.7      | 25.7       | 25.7    |
| = OR >300      | 21.6     | 25.5    | 26.2    | 26.3              | 26.3      | 26.4      | 26.4       | 26.4    |
| = OR >150      | 21.7     | 25.6    | 26.4    | 26.5              | 26.5      | 26.5      | 26.5       | 26.5    |
| = OR >0        | 21.7     | 25.7    | 26.4    | 26.5              | 26.5      | 26.6      | 26.6       | 26.6    |
| TOTAL          | 953      | 1126    | 1158    | 1162              | 1163      | 1165      | 1167       | 1168    |

TOTAL NUMBER OF OBS: 4384

PCT FREQ NH <5/8: 73.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|------|------|------|------|-----|-----|-----|-----|-------|-----------|
| 14.1 | 13.2 | 18.1 | 16.5 | 10.9 | 7.4 | 7.8 | 6.1 | 5.8 | .1    | 4654      |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

OCTOBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    | .1           |
|              | TOT %  | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .2           |
|              | TOT %  | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .2           |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | NO PCP | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | TOT %  | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .2           |
| 2<5          | PCP    | .0   | .0   | .0  | .0  | .0  | .1  | .1  | .1   | .0  | .0   | .0    | .3           |
|              | NO PCP | .3   | .2   | .0  | .0  | .1  | .2  | .0  | .1   | .0  | .0   | .0    | .9           |
|              | TOT %  | .3   | .2   | .0  | .0  | .2  | .3  | .1  | .1   | .0  | .0   | .0    | 1.3          |
| 5<10         | PCP    | .2   | .2   | .1  | .1  | .2  | .2  | .1  | .3   | .0  | .0   | .0    | 1.3          |
|              | NO PCP | 3.6  | 3.9  | .8  | .4  | .8  | 1.6 | 1.8 | 1.0  | .0  | .5   | 14.4  |              |
|              | TOT %  | 3.8  | 4.1  | .8  | .5  | 1.0 | 1.8 | 1.9 | 1.3  | .0  | .5   | 15.7  |              |
| 10+          | PCP    | .1   | .1   | .0  | .1  | .2  | .2  | .1  | .1   | .0  | .0   | .0    | 1.0          |
|              | NO PCP | 22.4 | 24.8 | 4.1 | 2.1 | 4.6 | 5.2 | 6.7 | 8.8  | .0  | 2.9  | 81.6  |              |
|              | TOT %  | 22.5 | 25.0 | 4.1 | 2.2 | 4.8 | 5.4 | 6.8 | 8.9  | .0  | 2.9  | 82.6  |              |
| TOT OBS      |        | 5115 |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |        | 26.7 | 29.3 | 5.0 | 2.7 | 5.9 | 7.6 | 8.8 | 10.3 | .0  | 3.5  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .2           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .2           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    | .1           |
|              | TOT %      | .0   | .0   | .0  | .0  | .0  | .1  | .0  | .0   | .0  | .0   | .0    | .2           |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    | .1           |
|              | 4-10       | .1   | .1   | .0  | .0  | .0  | .1  | .0  | .1   | .0  | .0   | .0    | .4           |
|              | 11-21      | .2   | .1   | .0  | .0  | .1  | .1  | .0  | .1   | .0  | .0   | .0    | .5           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .1  | .1  | .0   | .0  | .0   | .0    | .3           |
|              | TOT %      | .3   | .2   | .0  | .0  | .1  | .3  | .1  | .2   | .0  | .1   | .1    | 1.2          |
| 5<10         | 0-3        | .3   | .2   | .1  | .1  | .1  | .1  | .1  | .0   | .0  | .5   | 1.4   |              |
|              | 4-10       | 1.7  | 1.6  | .4  | .3  | .3  | .8  | .8  | .6   | .0  | .0   | 6.5   |              |
|              | 11-21      | 1.3  | 1.8  | .4  | .2  | .3  | .5  | .5  | .3   | .0  | .0   | 5.3   |              |
|              | 22+        | .3   | .3   | .0  | .0  | .1  | .1  | .2  | .2   | .0  | .0   | 1.2   |              |
|              | TOT %      | 3.6  | 3.9  | .9  | .5  | .8  | 1.5 | 1.5 | 1.2  | .0  | .5   | 14.4  |              |
| 10+          | 0-3        | 1.3  | 1.2  | .5  | .3  | .5  | .5  | .7  | .8   | .0  | 2.6  | 8.3   |              |
|              | 4-10       | 12.1 | 12.4 | 2.5 | 1.5 | 2.3 | 2.7 | 3.6 | 5.8  | .0  | .0   | 43.0  |              |
|              | 11-21      | 8.8  | 11.0 | 1.0 | .4  | 1.6 | 1.9 | 1.7 | 2.2  | .0  | .0   | 28.6  |              |
|              | 22+        | 1.0  | 1.6  | .2  | .1  | .2  | .3  | .2  | .3   | .0  | .0   | 3.8   |              |
|              | TOT %      | 23.2 | 26.2 | 4.2 | 2.3 | 4.6 | 5.3 | 6.2 | 9.1  | .0  | 2.6  | 83.8  |              |
| TOT OBS      |            | 7187 |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |            | 27.2 | 30.4 | 5.2 | 2.8 | 5.5 | 7.2 | 7.9 | 10.5 | .0  | 3.2  | 100.0 |              |

## OCTOBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL        | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|--------------------|---------------|
| 00003          | .3         | .2         | .8         | 3.2        | 8.1          | 6.4          | 2.7          | .7           | .4           | .5       | 23.4         | 76.6               | 1096          |
| 06009          | .0         | .2         | .8         | 4.0        | 11.1         | 7.3          | 2.6          | 1.1          | .7           | .9       | 28.6         | 71.4               | 1056          |
| 12015          | .1         | .2         | .7         | 3.8        | 8.7          | 7.9          | 2.8          | 1.0          | .3           | 1.0      | 26.6         | 73.4               | 1251          |
| 18021          | .1         | .0         | .2         | 3.2        | 8.0          | 6.9          | 2.8          | 1.3          | .6           | 1.0      | 24.2         | 75.8               | 1158          |
| TOT<br>PCT     | 5<br>.1    | 7<br>.2    | 28<br>.6   | 162<br>3.6 | 408<br>8.9   | 326<br>7.1   | 125<br>2.7   | 48<br>1.1    | 22<br>.5     | 40<br>.9 | 1171<br>25.7 | 3390<br>74.3       | 4561<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2     | 1/2<1    | 1<2      | 2<5       | 5<10         | 10+          | TOTAL<br>OBS  |
|----------------|----------|----------|----------|-----------|--------------|--------------|---------------|
| 00003          | .2       | .2       | .4       | 1.4       | 14.6         | 83.2         | 1683          |
| 06009          | .2       | .0       | .3       | 1.3       | 17.4         | 80.8         | 1940          |
| 12015          | .2       | .1       | .2       | 1.2       | 11.8         | 86.5         | 1761          |
| 18021          | .1       | .3       | .1       | 1.1       | 14.3         | 84.1         | 1994          |
| TOT<br>PCT     | 13<br>.2 | 12<br>.2 | 17<br>.2 | 93<br>1.3 | 1075<br>14.6 | 6168<br>83.6 | 7378<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|---------------|------------|-------------|-----------------|-------------------|---------------|
| 00003          | .4            | 1.6        | 6.1         | 19.7            | 74.2              | 1031          |
| 06009          | .0            | 1.1        | 6.1         | 23.9            | 70.0              | 1012          |
| 12015          | .1            | 1.2        | 6.3         | 22.0            | 71.7              | 1212          |
| 18021          | .2            | .4         | 4.7         | 20.5            | 74.8              | 1129          |
| TOT<br>PCT     | 7<br>.2       | 46<br>1.0  | 254<br>5.8  | 944<br>21.5     | 3186<br>72.7      | 4384<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | *     | .0    | .1    | .2    | *     | .0     | 15           | .4          |
| 75/79  | .0   | .0    | *     | .3    | 1.3   | 3.6   | 2.0   | .3     | 320          | 7.5         |
| 70/74  | .0   | .0    | *     | 1.2   | 8.8   | 22.3  | 24.0  | 9.3    | 2805         | 65.6        |
| 65/69  | .0   | .0    | *     | .5    | 3.5   | 9.1   | 8.1   | 4.4    | 1095         | 25.6        |
| 60/64  | .0   | .0    | *     | *     | *     | .2    | .4    | .2     | 36           | .8          |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | .0     | 2            | *           |
| TOTAL  | 0    | 0     | 4     | 85    | 585   | 1514  | 1476  | 609    | 4273         | 100.0       |
| PCT    | .0   | .0    | .1    | 2.0   | 13.7  | 35.4  | 34.5  | 14.3   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|------|-----|------|
| *    | .2   | .0  | .0  | *   | .1  | .0  | *    | .0  | .0   |
| 1.6  | 2.8  | .4  | .2  | .5  | .5  | .6  | .4   | .0  | .4   |
| 17.1 | 19.1 | 2.8 | 1.8 | 4.5 | 5.2 | 6.0 | 7.2  | .0  | 2.0  |
| 7.5  | 7.2  | 1.6 | .8  | .8  | 1.2 | 2.2 | 3.5  | .0  | .7   |
| .3   | .2   | .1  | *   | .0  | .1  | .1  | .1   | .0  | .0   |
| *    | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | *    |
| 26.6 | 29.5 | 4.9 | 2.8 | 5.9 | 7.1 | 8.9 | 11.1 | .0  | 3.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 82  | 75  | 73  | 70  | 66 | 64 | 59  | 69.9 | 2095         |
| 06009          | 85  | 76  | 74  | 70  | 66 | 62 | 58  | 69.8 | 2754         |
| 12015          | 84  | 81  | 78  | 73  | 68 | 65 | 59  | 72.7 | 2128         |
| 18021          | 84  | 79  | 76  | 71  | 67 | 64 | 60  | 71.3 | 2710         |
| TOT            | 85  | 79  | 76  | 71  | 66 | 64 | 58  | 70.9 | 9687         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.2   | 9.5   | 31.2  | 38.6  | 19.6  | 81    | 1094   |      |              |
| 06009          | .0   | 1.0   | 9.1   | 32.2  | 38.7  | 19.0  | 81    | 1069   |      |              |
| 12015          | .0   | 3.3   | 21.7  | 39.8  | 27.1  | 8.2   | 76    | 1164   |      |              |
| 18021          | .0   | 2.6   | 13.2  | 37.7  | 34.4  | 12.1  | 78    | 1101   |      |              |
| TOT            | 0    | 91    | 599   | 1563  | 1530  | 645   | 79    | 4428   |      |              |



## OCTOBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | *        | .0       | *        | 3     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .1       | .1       | 12    | *        | .2        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .3       | .1       | 27    | *        | .5        |
| 7/8                | .0       | .0       | *        | .1       | .3       | .3       | .1       | 40    | .0       | .8        |
| 6                  | .0       | .0       | *        | .2       | .2       | .3       | *        | 34    | *        | .7        |
| 5                  | .0       | .0       | .0       | .5       | .7       | .9       | *        | 103   | *        | 2.2       |
| 4                  | .0       | *        | *        | .6       | 1.3      | .7       | .1       | 128   | *        | 2.7       |
| 3                  | .0       | .0       | .2       | .9       | 2.1      | .3       | .0       | 164   | *        | 3.4       |
| 2                  | .0       | *        | .4       | 2.3      | 3.8      | .2       | *        | 323   | .1       | 6.7       |
| 1                  | *        | .0       | .5       | 4.7      | 4.2      | .1       | .0       | 448   | *        | 9.4       |
| 0                  | .0       | .2       | 1.4      | 11.7     | 5.1      | .1       | .0       | 873   | .1       | 18.3      |
| -1                 | .0       | .1       | 1.4      | 16.6     | 2.4      | .1       | .0       | 974   | .1       | 20.5      |
| -2                 | *        | .2       | 2.7      | 10.8     | 1.0      | .1       | .0       | 700   | .1       | 14.7      |
| -3                 | *        | *        | 2.7      | 5.5      | .5       | .0       | .0       | 410   | .1       | 8.6       |
| -4                 | .0       | .1       | 2.4      | 2.6      | .2       | .0       | .0       | 250   | .0       | 5.3       |
| -5                 | .0       | .2       | 1.3      | 1.5      | .1       | .0       | .0       | 142   | .0       | 3.0       |
| -6                 | .0       | .1       | .7       | .3       | *        | .0       | .0       | 53    | *        | 1.1       |
| -7/-8              | *        | .2       | .3       | .2       | .0       | .0       | .0       | 35    | *        | .7        |
| -9/-10             | *        | .1       | .1       | .1       | .0       | .0       | .0       | 12    | .0       | .3        |
| -11/-13            | .0       | *        | *        | .0       | .0       | .0       | .0       | 4     | *        | .1        |
| -14/-16            | *        | *        | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| TOTAL              | 6        | 61       | 664      | 2774     | 1047     | 165      | 20       | 4737  | 33       | 4704      |
| PCT                | .1       | 1.3      | 14.0     | 58.6     | 22.1     | 3.5      | .4       | 100.0 | .7       | 99.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE   |      |       |       |       |     |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|------|-------|-------|-------|-----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     |
| <1      | .7  | 1.9  | .2    | .0    | .0    | .0  | 2.8  | .7  | 1.8  | .1   | .0    | .0    | .0    | .0  | 2.7  |     |
| 1-2     | .5  | 7.9  | 2.4   | .0    | .0    | .0  | 10.8 | .3  | 8.7  | 2.0  | .0    | .0    | .0    | .0  | 11.0 |     |
| 3-4     | .0  | 3.4  | 3.8   | .2    | .0    | .0  | 7.4  | .0  | 3.6  | 4.1  | .2    | .0    | .0    | .0  | 7.8  |     |
| 5-6     | .0  | .5   | 3.3   | .2    | .0    | .0  | 4.0  | .0  | .5   | 3.1  | .4    | .0    | .0    | .0  | 4.0  |     |
| 7       | .0  | .1   | 1.0   | .3    | .0    | .0  | 1.4  | .0  | .0   | .9   | .4    | *     | *     | .0  | 1.4  |     |
| 8-9     | .0  | .1   | .1    | .2    | *     | .0  | .4   | .0  | .0   | .3   | .5    | *     | *     | .0  | .8   |     |
| 10-11   | .0  | .0   | .1    | .1    | *     | .0  | .2   | .0  | .0   | .2   | .1    | *     | *     | .0  | .3   |     |
| 12      | .0  | *    | .0    | .1    | .0    | .0  | .1   | .0  | .1   | *    | .1    | .0    | .0    | .0  | .1   |     |
| 13-16   | .0  | .0   | .0    | .2    | *     | .0  | .2   | .0  | .0   | .0   | .1    | *     | *     | .0  | .2   |     |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0   | .1    | .0    | .0    | .0  | .1   |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0   |     |
| TOT PCT | 1.2 | 13.9 | 10.9  | 1.4   | .1    | .0  | 27.5 | 1.1 | 14.6 | 10.8 | 1.7   | .1    | .1    | .1  | 28.3 |     |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     |
| <1      | .5  | .5   | *     | .0    | .0    | .0  | 1.0 | .2  | .3  | *    | .0    | .0    | .0    | .0  | .3  |     |
| 1-2     | .1  | 1.7  | .4    | *     | .0    | .0  | 2.2 | .1  | .7  | *    | .0    | .0    | .0    | .0  | .8  |     |
| 3-4     | .0  | .3   | .3    | .0    | .0    | .0  | .7  | .0  | .2  | .1   | *     | *     | .0    | .0  | .3  |     |
| 5-6     | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0  | .3   | .1    | .0    | .0    | .0  | .4  |     |
| 7       | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0  | .1   | *     | *     | .0    | .0  | .2  |     |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | .2  | .0  | .0  | *    | *     | .0    | .0    | .0  | *   |     |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 12      | .0  | *    | *     | .0    | .0    | .0  | .1  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| TOT PCT | .6  | 2.5  | 1.2   | .1    | .0    | .0  | 4.5 | .2  | 1.2 | .6   | .2    | .0    | .0    | .0  | 2.2 |     |

PERIOD: (OVER-ALL) 1963-1973

OCTOBER

AREA 0003 CASABLANCA SM  
31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .5   | .1    | .0    | .0    | .0  | .8  | .2  | .6   | *     | .0    | .0    | .0  | .8  |
| 1-2     | .1  | 1.4  | .2    | .0    | .0    | .0  | 1.7 | *   | 1.7  | .7    | .0    | .0    | .0  | 2.4 |
| 3-4     | .0  | .6   | .8    | *     | .0    | .0  | 1.4 | *   | .5   | 1.0   | *     | .0    | .0  | 1.5 |
| 5-6     | .0  | .1   | .5    | .2    | .0    | .0  | .8  | .0  | .1   | .9    | .2    | .0    | .0  | 1.2 |
| 7       | .0  | .1   | .2    | .2    | .0    | .0  | .5  | .0  | .1   | .3    | .1    | .0    | .0  | .5  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | *    | .1    | .3    | .1    | .0  | .5  |
| 10-11   | .0  | .0   | .0    | *     | *     | .0  | .1  | .0  | .1   | .0    | .1    | .0    | .0  | .2  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | *     | .0  | *   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 2.7  | 1.9   | .4    | *     | .0  | 5.3 | .3  | 3.0  | 3.0   | .9    | .1    | .0  | 7.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .4  | .8   | .0    | .0    | .0    | .0  | 1.2 | .5  | 1.5  | *     | .0    | .0    | .0  | 2.0  |           |
| 1-2     | .2  | 2.8  | .7    | .0    | .0    | .0  | 3.7 | .1  | 4.1  | .8    | .0    | .0    | .0  | 5.0  |           |
| 3-4     | .0  | 1.0  | 1.1   | .0    | .0    | .0  | 2.1 | .0  | 1.0  | .8    | .1    | .0    | .0  | 1.9  |           |
| 5-6     | .0  | .3   | .7    | .1    | .0    | .0  | 1.1 | .0  | .2   | .9    | .2    | *     | .0  | 1.3  |           |
| 7       | .0  | .1   | .4    | .1    | .0    | .0  | .7  | .0  | *    | .4    | .2    | .0    | .0  | .6   |           |
| 8-9     | .0  | *    | .2    | .1    | .0    | .0  | .3  | .0  | .0   | .0    | .1    | *     | .0  | .1   |           |
| 10-11   | .0  | *    | .0    | *     | .1    | .0  | .2  | .0  | .0   | *     | .1    | .0    | .0  | .2   |           |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .1    | .0  | .1   |           |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |           |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .6  | 5.0  | 3.1   | .5    | .2    | .0  | 9.4 | .6  | 6.8  | 2.9   | .9    | .1    | .0  | 11.4 | 95.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 8.5  | 8.1  | .5    | .0    | .0    | .0  | 17.1  |         |
| 1-2     | 1.6  | 28.5 | 7.2   | .0    | .0    | .0  | 37.3  |         |
| 3-4     | .1   | 10.4 | 11.9  | .6    | .0    | .0  | 22.9  |         |
| 5-6     | .0   | 1.6  | 9.8   | 1.4   | *     | .0  | 12.8  |         |
| 7       | .0   | .4   | 3.4   | 1.3   | *     | .0  | 5.3   |         |
| 8-9     | .0   | .1   | .7    | 1.2   | .2    | .0  | 2.2   |         |
| 10-11   | .0   | .1   | .3    | .4    | .2    | *   | 1.1   |         |
| 12      | .0   | .1   | *     | .3    | .1    | .0  | .5    |         |
| 13-16   | .0   | .0   | .0    | .5    | .1    | *   | .6    |         |
| 17-19   | .0   | .0   | .0    | .1    | .1    | .0  | .2    |         |
| 20-22   | .0   | .0   | .0    | .0    | *     | .0  | *     |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 10.1 | 49.3 | 33.8  | 6.0   | .7    | .1  | 100.0 | 2722    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.3 | 9.2  | 10.2 | 4.3  | 1.8  | .7  | .3    | .1  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1013  | 3        |
| 6-7          | *   | 1.4  | 5.6  | 7.3  | 3.5  | 2.1 | .8    | .5  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 752   | 5        |
| 8-9          | .0  | .4   | 2.5  | 4.2  | 3.1  | 1.8 | 1.1   | .6  | .4    | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 500   | 6        |
| 10-11        | .0  | .3   | 1.0  | 1.6  | 1.8  | 1.1 | .6    | .4  | .4    | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 280   | 7        |
| 12-13        | .0  | .0   | 1.4  | .8   | .8   | .3  | .5    | .1  | .3    | *     | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 153   | 7        |
| >13          | .0  | .0   | .0   | .2   | .2   | .1  | .2    | .1  | .2    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 38    | 10       |
| INDET        | 3.7 | 4.8  | 4.2  | 4.0  | 2.6  | 1.3 | .6    | .3  | .4    | *     | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 778   | 4        |
| TOTAL        | 210 | 370  | 871  | 786  | 483  | 258 | 148   | 69  | 65    | 11    | 17    | 6     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3494  | 5        |
| PCT          | 6.0 | 16.3 | 24.9 | 22.5 | 13.8 | 7.4 | 4.2   | 2.0 | 1.9   | .3    | .5    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

NOVEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | 1.6  | 3.3       | 1.0  | .0        | .0   | .0             | .2   | 6.1             | 3.6            | .7                      | .2          | .0                  | .0         | .0              | 89.5       |  |
| NE                 | .8   | 1.1       | .4   | .0        | .0   | .0             | .0   | 2.3             | 1.7            | .5                      | .3          | .0                  | .2         | .0              | 95.2       |  |
| E                  | 2.1  | 1.5       | 1.2  | .0        | .0   | .0             | .0   | 4.8             | 2.2            | 1.4                     | 1.4         | .0                  | .5         | .2              | 89.6       |  |
| SE                 | 3.2  | 3.2       | 1.7  | .0        | .0   | .0             | .1   | 8.3             | 4.2            | 4.3                     | .4          | .0                  | 1.0        | .0              | 82.3       |  |
| S                  | 5.3  | 3.0       | 1.7  | .0        | .0   | .0             | .2   | 10.2            | 4.1            | 3.9                     | .0          | .0                  | .5         | .2              | 81.7       |  |
| SW                 | 3.5  | 4.1       | .8   | .0        | .0   | .0             | .0   | 8.1             | 4.3            | 3.5                     | .0          | .0                  | .0         | .1              | 84.2       |  |
| W                  | 3.0  | 4.6       | 1.8  | .0        | .0   | .0             | .0   | 9.2             | 7.9            | 2.1                     | .5          | .0                  | .0         | .0              | 80.8       |  |
| NW                 | 3.0  | 3.7       | .8   | .0        | .0   | .0             | *    | 7.5             | 5.0            | 1.2                     | .3          | .0                  | .2         | .2              | 85.8       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | 3.1  | .0        | 1.5  | .0        | .0   | .0             | .0   | 4.6             | 2.3            | 3.1                     | .8          | .0                  | 1.5        | .0              | 88.5       |  |
| TOT PCT            | 2.3  | 2.7       | 1.0  | .0        | .0   | .0             | .1   | 5.9             | 3.6            | 1.6                     | .4          | .0                  | .2         | .1              | 88.4       |  |
| TOT OBS:           | 5363 |           |      |           |      |                |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                       |                  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-----------------------|------------------|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST | NO<br>SIG<br>WEA |
| 00003               | 3.3                | 2.1          | 1.1  | .0           | .0   | .0                    | .0   | 6.4                     | 4.0               | 3.4          | .6                | .0                        | .0            | .1                    | 86.0             |
| 06009               | 2.3                | 3.1          | 1.2  | .0           | .0   | .0                    | .1   | 6.7                     | 3.7               | 2.6          | .5                | .0                        | .1            | .0                    | 86.7             |
| 12015               | 1.5                | 2.9          | .8   | .0           | .0   | .0                    | .0   | 5.1                     | 3.5               | .3           | .1                | .0                        | .5            | .1                    | 90.6             |
| 18021               | 2.3                | 2.8          | 1.0  | .0           | .0   | .0                    | .1   | 6.2                     | 3.3               | .9           | .3                | .0                        | .3            | .1                    | 89.2             |
| TOT PCT<br>TOT OBS: | 2.3<br>5569        | 2.7          | 1.0  | .0           | .0   | .0                    | .1   | 6.1                     | 3.6               | 1.8          | .4                | .0                        | .2            | .1                    | 88.2             |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.0                | 8.2  | 8.4   | 1.8   | .2    | .0  |           | 19.5     | 12.4     | 19.3       | 18.5  | 19.3  | 19.6  | 19.5  | 18.3  | 19.7  | 20.5  |
| NE       | .7                 | 11.9 | 14.4  | 2.6   | .2    | .0  |           | 29.8     | 12.8     | 30.6       | 29.1  | 30.4  | 28.9  | 28.4  | 25.5  | 29.6  | 32.1  |
| E        | .6                 | 5.1  | 3.1   | .5    | *     | .0  |           | 9.2      | 10.4     | 9.1        | 7.7   | 8.9   | 10.8  | 9.8   | 12.7  | 8.6   | 8.8   |
| SE       | .4                 | 2.7  | 1.9   | .5    | *     | .0  |           | 5.5      | 11.3     | 6.1        | 7.1   | 5.8   | 5.0   | 5.5   | 5.3   | 4.9   | 5.7   |
| S        | .6                 | 2.7  | 2.3   | .5    | .1    | .0  |           | 6.1      | 11.3     | 6.1        | 5.5   | 6.1   | 6.1   | 7.3   | 4.2   | 6.2   | 4.1   |
| SW       | .6                 | 3.3  | 2.9   | .8    | .1    | *   |           | 7.7      | 12.3     | 7.1        | 7.1   | 7.7   | 7.9   | 8.0   | 10.5  | 7.9   | 7.2   |
| W        | .6                 | 3.5  | 3.0   | 1.0   | .2    | .0  |           | 8.2      | 12.8     | 8.3        | 6.9   | 7.9   | 8.0   | 7.7   | 9.2   | 9.0   | 8.8   |
| NW       | .6                 | 5.3  | 3.9   | 1.5   | .2    | .0  |           | 11.5     | 12.9     | 10.3       | 16.5  | 11.0  | 12.6  | 11.7  | 14.3  | 12.1  | 11.1  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.3                |      |       |       |       |     |           | 2.3      | .0       | 3.0        | 1.6   | 2.9   | 1.2   | 2.2   | .0    | 2.0   | 1.7   |
| TOT OBS  | 709                | 4177 | 3905  | 877   | 102   | 1   | 9771      |          | 12.0     | 1885       | 123   | 1958  | 883   | 2029  | 138   | 1907  | 848   |
| TOT PCT  | 7.3                | 42.7 | 40.0  | 9.0   | 1.0   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 4.1                | 10.3 | 4.6   | .5    | *   |           | 19.5     | 12.4     | 19.3       | 19.4  | 19.4  | 19.9  |    |
| NE       | 4.8                | 17.1 | 7.4   | .5    | .0  |           | 29.8     | 12.8     | 30.5       | 29.9  | 28.2  | 30.4  |    |
| E        | 2.8                | 5.0  | 1.4   | .1    | .0  |           | 9.3      | 10.4     | 9.0        | 9.5   | 10.0  | 8.7   |    |
| SE       | 1.7                | 2.5  | 1.1   | .2    | *   |           | 5.5      | 11.3     | 6.2        | 5.5   | 5.5   | 5.1   |    |
| S        | 1.8                | 3.0  | 1.1   | .2    | *   |           | 6.1      | 11.3     | 6.1        | 6.1   | 7.1   | 5.6   |    |
| SW       | 2.1                | 3.5  | 1.6   | .4    | .1  |           | 7.7      | 12.3     | 7.1        | 7.8   | 8.1   | 7.7   |    |
| W        | 2.0                | 3.8  | 1.9   | .5    | *   |           | 8.2      | 12.8     | 8.2        | 7.9   | 7.8   | 8.9   |    |
| NW       | 2.5                | 5.7  | 2.5   | .7    | *   |           | 11.5     | 12.9     | 10.7       | 11.5  | 11.9  | 11.8  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.3                |      |       |       |     |           | 2.3      | .0       | 2.9        | 2.4   | 2.0   | 1.9   |    |
| TOT OBS  | 2358               | 4972 | 2113  | 313   | 15  | 9771      |          | 12.0     | 2008       | 2841  | 2167  | 2755  |    |
| TOT PCT  | 24.1               | 50.9 | 21.6  | 3.2   | .2  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

# NOVEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00003 | 2.9  | 4.3 | 42.2 | 40.9  | 8.8   | .8    | .0  | 11.9  | 100.0    | 2008      |
| 06009 | 2.4  | 5.4 | 44.6 | 38.5  | 8.1   | 1.1   | .0  | 11.6  | 100.0    | 2841      |
| 12015 | 2.0  | 4.9 | 41.4 | 40.3  | 10.2  | 1.2   | .0  | 12.4  | 100.0    | 2167      |
| 18021 | 1.9  | 5.1 | 42.3 | 40.5  | 9.1   | 1.1   | .0  | 12.1  | 100.0    | 2755      |
| TOT   | 223  | 486 | 4177 | 3905  | 877   | 102   | 1   | 12.0  |          | 9771      |
| PCT   | 2.3  | 5.0 | 42.7 | 40.0  | 9.0   | 1.0   | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 4.4  | 5.3  | 6.9  | 2.3       | 4.4       | 4.4              |
| NE       | 7.8  | 7.0  | 9.2  | 4.0       | 4.3       | 4.3              |
| E        | 2.8  | 1.7  | 2.8  | 1.5       | 4.2       | 4.2              |
| SE       | 1.2  | 1.1  | 1.9  | 1.3       | 5.0       | 5.0              |
| S        | 1.5  | 1.4  | 2.7  | 1.6       | 4.9       | 4.9              |
| SW       | 1.7  | 1.8  | 2.9  | 1.7       | 5.0       | 5.0              |
| W        | 1.5  | 2.3  | 3.6  | 1.6       | 5.0       | 5.0              |
| NW       | 2.2  | 3.8  | 4.3  | 1.4       | 4.5       | 4.5              |
| VAR      | .0   | .0   | .0   | .0        | .0        | .0               |
| CALM     | .8   | .6   | .6   | .5        | 4.1       | 4.1              |
| TOT OBS  | 1046 | 1098 | 1541 | 713       | 4398      | 4.5              |
| TOT PCT  | 23.8 | 25.0 | 35.0 | 16.2      | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|----------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT  | OBS   |
| .1  | .0  | .2  | 1.2 | 3.1  | 1.8  | .8   | .2   | .1   | .1    | 11.8     |       |
| .0  | .1  | 1.2 | 3.3 | 2.8  | 1.4  | .5   | .2   | .4   | .4    | 18.1     |       |
| .0  | .0  | .4  | .7  | .9   | .2   | .1   | .0   | .3   | .6    | 6.1      |       |
| .0  | .0  | .5  | .8  | .6   | .3   | .1   | .0   | .1   | .1    | 2.9      |       |
| .0  | .0  | .1  | .6  | .8   | .7   | .3   | .1   | .0   | .1    | 4.5      |       |
| .0  | .1  | .5  | 1.1 | .9   | .3   | .1   | .0   | .1   | .1    | 4.9      |       |
| .0  | .0  | .1  | .7  | 1.5  | 1.1  | .4   | .1   | .0   | .0    | 5.1      |       |
| .1  | .0  | .1  | .9  | 1.7  | 1.1  | .4   | .0   | .0   | .0    | 7.4      |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0       |       |
| .0  | .0  | .0  | .2  | .3   | .2   | .1   | .0   | .0   | .0    | 1.8      |       |
| .9  | 1   | 30  | 268 | 594  | 446  | 185  | 54   | 17   | 46    | 2748     | 4398  |
| .2  | *   | .7  | 6.1 | 13.5 | 10.1 | 4.2  | 1.2  | .4   | 1.0   | 62.5     | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM) | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >90YD | = OR >0 |
|----------------|----------|---------|---------|-----------|---------|-----------|-----------|------------|---------|
| = OR >6500     | 1.3      | 1.5     | 1.5     | 1.5       | 1.5     | 1.5       | 1.5       | 1.5        | 1.5     |
| = OR >5000     | 2.5      | 2.7     | 2.7     | 2.7       | 2.7     | 2.7       | 2.7       | 2.7        | 2.7     |
| = OR >3500     | 6.1      | 6.8     | 6.9     | 6.9       | 7.0     | 7.0       | 7.0       | 7.0        | 7.0     |
| = OR >2000     | 14.3     | 16.7    | 17.0    | 17.0      | 17.0    | 17.0      | 17.0      | 17.0       | 17.0    |
| = OR >1000     | 25.1     | 29.7    | 30.3    | 30.4      | 30.4    | 30.4      | 30.4      | 30.4       | 30.4    |
| = OR >600      | 29.7     | 35.6    | 36.4    | 36.4      | 36.5    | 36.5      | 36.5      | 36.5       | 36.5    |
| = OR >300      | 30.1     | 36.2    | 37.0    | 37.1      | 37.2    | 37.2      | 37.2      | 37.2       | 37.2    |
| = OR >150      | 30.1     | 36.2    | 37.0    | 37.2      | 37.2    | 37.2      | 37.2      | 37.2       | 37.2    |
| = OR >0        | 30.2     | 36.4    | 37.2    | 37.3      | 37.4    | 37.4      | 37.4      | 37.4       | 37.4    |
| TOTAL          | 1365     | 1646    | 1685    | 1690      | 1692    | 1692      | 1693      | 1693       | 1693    |

TOTAL NUMBER OF OBS: 4527

PCT FREQ NH < 5/8: 62.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL OBS |
|------|------|------|------|------|-----|-----|-----|------|-------|-----------|
| 10.3 | 11.3 | 14.1 | 14.4 | 11.9 | 8.5 | 9.2 | 8.0 | 12.1 | .1    | 4804      |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

NOVEMBER

AREA 0003 CASABLANCA SW  
31.7N 19.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|------|------|------|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | NO PCP | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
|              | TOT %  | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | NO PCP | * .0 | * .1 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
|              | TOT %  | * .0 | * .1 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
| 1<2          | PCP    | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | .0   | .0   | .1    | .1           |
|              | NO PCP | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
|              | TOT %  | .0   | .0   | .0   | .0   | .0   | .0   | .1   | .0   | .0   | .0   | .0    | .1           |
| 2<5          | PCP    | .1   | * .0 | .1   | .1   | .1   | .1   | .1   | .1   | .0   | .0   | .5    | .5           |
|              | NO PCP | .1   | .2   | .1   | .1   | .1   | .1   | .1   | .1   | .0   | * .0 | * .9  | .9           |
|              | TOT %  | .2   | .2   | .1   | .2   | .2   | .1   | .2   | .1   | .0   | * .0 | * 1.4 | 1.4          |
| 5<10         | PCP    | .6   | .4   | .3   | .3   | .3   | .3   | .4   | .5   | .0   | .1   | 3.1   | 3.1          |
|              | NO PCP | 2.8  | 3.1  | 1.0  | 1.2  | .9   | 1.2  | 1.2  | 1.8  | .0   | .3   | 13.5  | 13.5         |
|              | TOT %  | 3.4  | 3.5  | 1.3  | 1.5  | 1.2  | 1.5  | 1.5  | 2.3  | .0   | .4   | 16.6  | 16.6         |
| 10+          | PCP    | .5   | .3   | .1   | .1   | .3   | .3   | .3   | .4   | .0   | * .2 | 2.3   | 2.3          |
|              | NO PCP | 15.3 | 23.8 | 7.1  | 3.8  | 5.6  | 6.5  | 6.6  | 8.9  | .0   | 1.9  | 79.5  | 79.5         |
|              | TOT %  | 15.8 | 24.0 | 7.2  | 4.0  | 5.9  | 6.7  | 6.9  | 9.2  | .0   | 2.0  | 81.7  | 81.7         |
| TOT OBS      |        | 5350 |      |      |      |      |      |      |      |      |      |       |              |
| TOT PCT      |        | 19.5 | 27.7 | 8.7  | 5.6  | 7.3  | 8.4  | 8.7  | 11.7 | .0   | 2.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|------|------|------|------|------|------|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | 11-21      | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .0           |
|              | 22+        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | TOT %      | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
| 1/2<1        | 0-3        | .0   | .0   | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | * .0 | .0   | .0   | * .0 | .0   | .0   | .0   | .0   | .1    | .1           |
|              | 11-21      | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .0           |
|              | 22+        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | TOT %      | * .0 | * .1 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0  | .1           |
| 1<2          | 0-3        | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | .0   | .0   | .0    | .0           |
|              | 4-10       | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .1    | .1           |
|              | 11-21      | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .1    | .1           |
|              | 22+        | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | * .0 | .0    | .0           |
|              | TOT %      | * .0 | * .0 | * .0 | * .0 | * .0 | .1   | .1   | * .0 | * .0 | .0   | .2    | .2           |
| 2<5          | 0-3        | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .0   | * .0 | .1    | .1           |
|              | 4-10       | .1   | .1   | .1   | * .1 | .1   | .1   | .1   | * .1 | .0   | .0   | .5    | .5           |
|              | 11-21      | .2   | .1   | * .1 | .1   | .1   | .1   | * .1 | .1   | .0   | .0   | .6    | .6           |
|              | 22+        | * .1 | .0   | * .1 | * .1 | .1   | * .1 | * .1 | * .1 | .0   | .0   | .3    | .3           |
|              | TOT %      | .3   | .3   | .1   | .2   | .2   | .2   | .2   | .1   | .0   | * .0 | * 1.5 | 1.5          |
| 5<10         | 0-3        | .1   | * .1 | * .1 | .1   | .1   | .1   | .1   | .1   | .0   | .3   | 1.0   | 1.0          |
|              | 4-10       | 1.1  | 1.3  | .6   | .3   | .3   | .4   | .4   | .6   | .0   | .0   | 5.1   | 5.1          |
|              | 11-21      | 1.3  | 1.5  | .5   | .6   | .5   | .6   | .5   | .7   | .0   | .0   | 6.1   | 6.1          |
|              | 22+        | .5   | .5   | .1   | .2   | .2   | .3   | .3   | .6   | .0   | .0   | 2.6   | 2.6          |
|              | TOT %      | 3.1  | 3.3  | 1.1  | 1.2  | 1.1  | 1.4  | 1.3  | 2.0  | .0   | .3   | 14.8  | 14.8         |
| 10+          | 0-3        | .8   | .5   | .4   | .2   | .5   | .4   | .5   | .5   | .0   | 1.9  | 5.6   | 5.6          |
|              | 4-10       | 6.9  | 9.9  | 3.7  | 2.1  | 2.5  | 3.0  | 3.0  | 4.5  | .0   | .0   | 35.5  | 35.5         |
|              | 11-21      | 7.8  | 12.7 | 2.4  | 1.2  | 2.1  | 2.5  | 2.4  | 3.6  | .0   | .0   | 34.7  | 34.7         |
|              | 22+        | 1.7  | 2.4  | .3   | .3   | .3   | .5   | .8   | 1.2  | .0   | .0   | 7.4   | 7.4          |
|              | TOT %      | 17.1 | 25.5 | 6.8  | 3.9  | 5.3  | 6.5  | 6.7  | 9.8  | .0   | 1.9  | 83.3  | 83.3         |
| TOT OBS      |            | 7387 |      |      |      |      |      |      |      |      |      |       |              |
| TOT PCT      |            | 20.5 | 29.0 | 8.1  | 5.2  | 6.7  | 8.1  | 8.2  | 12.0 | .0   | 2.2  | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

NOVEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH < 5/8 | TOTAL |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|----------|-------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       | ANY HGT  | OBS   |
| 00003 | .5  | .0  | .5  | 6.1 | 11.7 | 8.1  | 2.5  | .7   | .1   | 1.0   | 31.3  | 68.7     | 1100  |
| 06009 | .1  | .1  | .7  | 5.1 | 14.4 | 10.3 | 4.1  | 1.2  | .4   | 1.1   | 37.7  | 62.3     | 1142  |
| 12015 | .1  | .1  | .5  | 5.7 | 12.3 | 9.7  | 5.5  | 2.0  | .7   | 1.0   | 37.6  | 62.4     | 1273  |
| 18021 | .1  | .0  | .9  | 7.0 | 13.4 | 10.8 | 4.3  | .7   | .3   | 1.0   | 38.5  | 61.5     | 1066  |
| TOT   | 9   | 2   | 30  | 280 | 607  | 456  | 195  | 96   | 18   | 49    | 1702  | 2979     | 4681  |
| PCT   | .2  | *   | .6  | 6.0 | 13.0 | 9.7  | 4.2  | 1.2  | .4   | 1.0   | 36.4  | 63.6     | 100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NH) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL |
|-------|------|-------|-----|-----|------|------|-------|
| (GMT) |      |       |     |     |      |      | OBS   |
| 00003 | .1   | .1    | .1  | 1.7 | 14.3 | 83.6 | 1662  |
| 06009 | .1   | .1    | .1  | 1.5 | 16.3 | 82.0 | 2098  |
| 12015 | .0   | .1    | .3  | 1.4 | 12.5 | 85.7 | 1818  |
| 18021 | *    | *     | .4  | 1.4 | 16.1 | 82.0 | 2018  |
| TOT   | 5    | 7     | 16  | 114 | 1132 | 6322 | 7596  |
| PCT   | .1   | .1    | .2  | 1.5 | 14.9 | 83.2 | 100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HR    | <150  | <600 | <1000 | 1000+ | NH < 5/8 | TOTAL |
|-------|-------|------|-------|-------|----------|-------|
| (GMT) | <50YD | <1   | <5    | AND5+ | AND 5+   | OBS   |
| 00003 | .6    | 1.1  | 8.6   | 24.4  | 67.0     | 1049  |
| 06009 | .2    | 1.0  | 7.0   | 32.0  | 61.0     | 1103  |
| 12015 | .1    | .7   | 7.5   | 31.2  | 61.3     | 1240  |
| 18021 | .1    | 1.1  | 9.2   | 30.7  | 60.2     | 1135  |
| TOT   | 10    | 44   | 364   | 1344  | 2819     | 4527  |
| PCT   | .2    | 1.0  | 8.0   | 29.7  | 62.3     | 100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL | PCT   |
|--------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
|        |      |       |       |       |       |       |       |        | OBS   | FREQ  |
| 80/84  | .0   | .0    | *     | .0    | .0    | .0    | .0    | .0     | 1     | *     |
| 75/79  | .0   | .0    | *     | .1    | .2    | .4    | .2    | *      | 39    | .9    |
| 70/74  | .0   | *     | .1    | .7    | 3.3   | 8.4   | 7.7   | 2.6    | 1017  | 22.8  |
| 65/69  | .0   | .0    | .1    | 2.6   | 11.1  | 19.7  | 17.8  | 6.7    | 2590  | 58.1  |
| 60/64  | .0   | .0    | .1    | 1.1   | 5.2   | 4.6   | 3.9   | 2.4    | 771   | 17.3  |
| 55/59  | .0   | .0    | .0    | *     | .1    | .2    | .3    | .3     | 41    | .9    |
| TOTAL  | 0    | 1     | 13    | 204   | 890   | 1485  | 1329  | 537    | 4459  | 100.0 |
| PCT    | .0   | *     | .3    | 4.6   | 20.0  | 33.3  | 29.8  | 12.0   |       |       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|------|-----|------|
| 80/84 | .0   | .0   | .0  | .0  | .0  | .0  | *   | .0   | .0  | .0   |
| 75/79 | .2   | *    | .1  | *   | .1  | .2  | .2  | .1   | .0  | .0   |
| 70/74 | 3.1  | 4.7  | 2.7 | 1.5 | 2.6 | 3.1 | 2.1 | 2.5  | .0  | .5   |
| 65/69 | 10.9 | 17.5 | 5.5 | 3.5 | 3.8 | 4.2 | 4.7 | 6.6  | .0  | 1.3  |
| 60/64 | 4.6  | 5.4  | .8  | .6  | .7  | .8  | 1.7 | 2.4  | .0  | .4   |
| 55/59 | .2   | .1   | *   | *   | .1  | .1  | .1  | .2   | .0  | *    |
| TOTAL | 19.0 | 27.6 | 9.1 | 5.7 | 7.3 | 8.4 | 8.8 | 11.8 | .0  | 2.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL |
|-------|-----|-----|-----|-----|----|----|-----|------|-------|
| (GMT) |     |     |     |     |    |    |     |      | OBS   |
| 00003 | 82  | 73  | 71  | 67  | 62 | 59 | 52  | 66.5 | 2065  |
| 06009 | 78  | 73  | 71  | 66  | 62 | 59 | 54  | 66.3 | 2869  |
| 12015 | 82  | 77  | 74  | 69  | 63 | 59 | 54  | 68.8 | 2145  |
| 18021 | 80  | 76  | 73  | 67  | 62 | 59 | 52  | 67.5 | 2761  |
| TOT   | 82  | 75  | 72  | 67  | 62 | 59 | 52  | 67.2 | 9840  |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL |
|-------|------|-------|-------|-------|-------|--------|------|-------|
| (GMT) |      |       |       |       |       |        |      | OBS   |
| 00003 | .0   | 4.2   | 18.9  | 29.6  | 32.7  | 14.6   | 78   | 1107  |
| 06009 | .0   | 3.3   | 16.5  | 31.2  | 34.1  | 14.9   | 78   | 1191  |
| 12015 | .0   | 7.7   | 25.0  | 36.2  | 22.7  | 8.4    | 74   | 1184  |
| 18021 | .0   | 4.1   | 18.8  | 35.4  | 30.2  | 11.5   | 77   | 1140  |
| TOT   | 0    | 223   | 915   | 1533  | 1381  | 570    | 77   | 4622  |



## NOVEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | M<br>FOG | W0<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *        | 5     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | *        | .1       | .0       | 8     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .1       | *        | 19    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .1       | .0       | 20    | .0       | .4        |
| 6                  | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .1       | .0       | 17    | .0       | .3        |
| 5                  | .0       | .0       | .0       | *        | .1       | .4       | .5       | .1       | *        | 59    | *        | 1.2       |
| 4                  | .0       | .0       | .0       | .1       | .3       | .8       | .5       | .1       | .0       | 84    | .0       | 1.7       |
| 3                  | .0       | .0       | .0       | *        | .5       | .7       | .6       | *        | .0       | 91    | .0       | 1.8       |
| 2                  | .0       | .0       | *        | .1       | 1.1      | 2.7      | .9       | .0       | .0       | 236   | *        | 4.7       |
| 1                  | .0       | .0       | .0       | .4       | 2.2      | 4.5      | .7       | .0       | .0       | 387   | .1       | 7.8       |
| 0                  | .0       | .0       | *        | .9       | 5.2      | 7.2      | .4       | *        | .0       | 674   | *        | 13.6      |
| -1                 | .0       | .0       | *        | 1.2      | 8.3      | 6.8      | .1       | .0       | .0       | 817   | *        | 16.5      |
| -2                 | .0       | *        | .1       | 1.7      | 10.4     | 3.8      | .1       | .0       | .0       | 792   | .1       | 16.0      |
| -3                 | .0       | *        | .1       | 2.6      | 7.4      | 1.7      | .0       | .0       | .0       | 582   | .1       | 11.7      |
| -4                 | .0       | *        | .1       | 2.9      | 4.8      | .8       | *        | .0       | .0       | 425   | .1       | 8.6       |
| -5                 | .0       | .0       | .1       | 2.9      | 2.7      | .4       | *        | .0       | .0       | 306   | *        | 6.2       |
| -6                 | .0       | *        | .2       | 1.8      | 1.1      | .2       | .0       | .0       | .0       | 159   | .0       | 3.2       |
| -7/-8              | .0       | .0       | .5       | 1.5      | .9       | .2       | .0       | .0       | .0       | 153   | .0       | 3.1       |
| -9/-10             | .0       | .1       | .3       | .7       | .3       | .0       | .0       | .0       | .0       | 64    | .0       | 1.3       |
| -11/-13            | *        | .1       | .2       | .2       | *        | .0       | .0       | .0       | .0       | 25    | .0       | .5        |
| -14/-16            | *        | .2       | *        | *        | .0       | .0       | .0       | .0       | .0       | 12    | .0       | .2        |
| TOTAL              | 2        |          | 86       |          | 2241     |          | 210      |          | 5        | 4935  | 20       | 4915      |
| PCT                | *        | .4       | 1.7      | 16.9     | 45.4     | 30.7     | 4.3      | .5       | .1       | 100.0 | .4       | 99.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .5  | 1.1  | .1    | .0    | .0    | .0  | 1.7  | .1  | 1.4  | .1    | .0    | .0    | .0  | 1.6  |
| 1-2     | .2  | 3.8  | 1.3   | .0    | .0    | .0  | 5.3  | .2  | 4.7  | 2.7   | .0    | .0    | .0  | 7.6  |
| 3-4     | .1  | 1.6  | 3.5   | .4    | .0    | .0  | 5.6  | *   | 2.6  | 6.0   | .3    | .0    | .0  | 9.0  |
| 5-6     | .0  | .5   | 3.6   | .4    | *     | .0  | 4.5  | .0  | .8   | 4.8   | .7    | .0    | .0  | 6.3  |
| 7       | .0  | .1   | 1.1   | .7    | .1    | .0  | 1.9  | .0  | *    | 1.3   | 1.1   | *     | .0  | 2.5  |
| 8-9     | .0  | *    | .1    | .6    | *     | .0  | .7   | .0  | .0   | .3    | .6    | .1    | .0  | 1.0  |
| 10-11   | .0  | *    | .1    | .2    | *     | .0  | .3   | .0  | .0   | .2    | .4    | .1    | .0  | .7   |
| 12      | .0  | .0   | .0    | .1    | *     | .0  | .1   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | *     | .2    | .1    | .0  | .4   | .0  | .0   | .0    | .1    | .2    | .0  | .3   |
| 17-19   | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | .0    | *     | *     | .0  | *    |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .8  | 7.1  | 9.8   | 2.6   | .3    | .0  | 20.6 | .4  | 9.6  | 15.5  | 3.3   | .4    | .0  | 29.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .7   | .1    | .0    | .0    | .0  | .9  | .1  | .3   | *     | .0    | .0    | .0  | .5  |
| 1-2     | .3  | 2.4  | .9    | .0    | .0    | .0  | 3.6 | .1  | 1.5  | .3    | .0    | .0    | .0  | 1.9 |
| 3-4     | *   | 1.0  | 1.0   | *     | .0    | .0  | 2.1 | .0  | .4   | .7    | *     | .0    | .0  | 1.1 |
| 5-6     | .0  | .3   | .6    | .2    | .0    | .0  | 1.0 | .0  | .1   | .7    | .3    | .0    | .0  | 1.1 |
| 7       | .0  | .0   | .3    | *     | .0    | .0  | .3  | .0  | .0   | .5    | .2    | .0    | .0  | .7  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | *    | .1    | .1    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | *     | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | .1  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 4.3  | 2.9   | .3    | .0    | .0  | 8.0 | .2  | 2.3  | 2.3   | .8    | *     | .0  | 5.6 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | .3   | .0    | .0    | .0    | .0  | .7  | .2  | .5   | .0    | .0    | .0    | .0  | .7  |
| 1-2     | .1  | 1.6  | .6    | .0    | .0    | .0  | 2.3 | .2  | 1.9  | .7    | .0    | .0    | .0  | 2.8 |
| 3-4     | .0  | .5   | 1.3   | .0    | .0    | .0  | 1.9 | .0  | .8   | .9    | .0    | .0    | .0  | 1.7 |
| 5-6     | .0  | .1   | .7    | .1    | .0    | .0  | .9  | .0  | .2   | .9    | .1    | .0    | .0  | 1.2 |
| 7       | .0  | .0   | .3    | .1    | .0    | .0  | .4  | .0  | .0   | .3    | .1    | .0    | .0  | .4  |
| 8-9     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 2.7  | 3.1   | .3    | .0    | .0  | 6.6 | .4  | 3.4  | 2.9   | .4    | .0    | .0  | 7.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .3  | .3   | .0    | .0    | .0    | .0  | .7  | .2  | .3   | .1    | .0    | .0    | .0  | .6   |           |
| 1-2     | .2  | 2.6  | .5    | .0    | .0    | .0  | 3.3 | .1  | 2.5  | .5    | .0    | .0    | .0  | 3.1  |           |
| 3-4     | .0  | .5   | 1.1   | .1    | .0    | .0  | 1.6 | .0  | 1.1  | 1.8   | .0    | .0    | .0  | 3.0  |           |
| 5-6     | .0  | .1   | .9    | .3    | .0    | .0  | 1.3 | .0  | .3   | 1.4   | .3    | .0    | .0  | 2.0  |           |
| 7       | .0  | .0   | .4    | .3    | .0    | .0  | .7  | .0  | .1   | .7    | .6    | .0    | .0  | 1.3  |           |
| 8-9     | .0  | .0   | .2    | .3    | .0    | .0  | .6  | .0  | .0   | .3    | .6    | .0    | .0  | .9   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .1    | .0    | .0  | .2   |           |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .2   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .5  | 3.6  | 3.0   | 1.2   | .0    | .0  | 8.3 | .3  | 4.5  | 4.7   | 1.7   | .1    | .0  | 11.3 | 96.7      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.3 | 5.2  | .3    | .0    | .0    | .0  | 11.8  |         |
| 1-2     | 1.7 | 20.9 | 7.2   | .0    | .0    | .0  | 29.9  |         |
| 3-4     | .3  | 8.3  | 15.9  | .9    | .0    | .0  | 25.4  |         |
| 5-6     | .0  | 2.4  | 13.1  | 2.4   | .1    | .0  | 17.9  |         |
| 7       | .0  | .2   | 4.8   | 3.0   | .1    | .0  | 8.1   |         |
| 8-9     | .0  | .2   | 1.3   | 2.1   | .2    | .0  | 3.8   |         |
| 10-11   | .0  | .1   | .4    | .8    | .1    | .0  | 1.4   |         |
| 12      | .0  | .0   | .0    | .5    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | .1    | .5    | .3    | .0  | .9    |         |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.3 | 37.3 | 43.2  | 10.3  | .9    | .0  | 100.0 | 2864    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | 1.3 | 7.9  | 8.7  | 4.9  | 2.0  | .7   | .2    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 935         | 4 |
| 6-7             | .0  | 1.1  | 4.9  | 6.1  | 4.4  | 2.4  | 1.6   | .7  | .4    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 783         | 6 |
| 8-9             | .0  | .4   | 1.2  | 3.5  | 3.8  | 2.8  | 2.6   | .9  | .7    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 576         | 8 |
| 10-11           | .0  | .9   | .6   | 1.3  | 1.4  | 1.4  | 1.5   | .6  | 1.0   | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 324         | 8 |
| 12-13           | .0  | .0   | .8   | .6   | .6   | .8   | .6    | .3  | .4    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 151         | 8 |
| >13             | .0  | .0   | .0   | .3   | .3   | .4   | .4    | .1  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 63          | 9 |
| INDET           | 2.7 | 3.9  | 3.5  | 3.2  | 3.1  | 2.1  | 1.3   | .4  | .7    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 754         | 5 |
| TOTAL           | 144 | 511  | 707  | 714  | 558  | 379  | 295   | 110 | 121   | 34    | 11    | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 3586        | 6 |
| PCT             | 4.0 | 14.2 | 19.7 | 19.9 | 15.6 | 10.6 | 8.2   | 3.1 | 3.4   | .9    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

DECEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | .8   | 3.0       | .8   | .0        | .0   | .0              | *    | 4.6             | 4.9            | .8                      | .3          | .0                  | .1         | .1              | 89.4       |  |
| NE                 | 1.1  | 1.4       | .7   | .0        | .0   | .0              | *    | 3.3             | 2.3            | .3                      | .3          | .0                  | .1         | *               | 93.6       |  |
| E                  | 1.8  | 1.2       | .8   | .0        | .0   | .0              | .0   | 3.8             | .7             | 1.3                     | .3          | .0                  | .0         | .0              | 93.8       |  |
| SE                 | 3.2  | 1.2       | .0   | .0        | .0   | .0              | .0   | 4.4             | 1.4            | 1.8                     | .6          | .0                  | 1.7        | .0              | 90.1       |  |
| S                  | 3.1  | 1.7       | .5   | .0        | .0   | .0              | .0   | 5.4             | 1.9            | 2.0                     | 1.1         | .0                  | .7         | .0              | 90.1       |  |
| SW                 | 2.6  | 6.7       | .5   | .0        | .0   | .0              | .0   | 9.7             | 5.0            | 1.6                     | .0          | .0                  | .6         | .0              | 83.9       |  |
| W                  | 2.7  | 7.3       | 1.7  | .0        | .0   | .0              | .2   | 11.9            | 5.8            | .5                      | 1.2         | .0                  | .5         | .0              | 80.3       |  |
| NW                 | 2.6  | 6.1       | .5   | .0        | .0   | .0              | .2   | 9.5             | 5.4            | 2.4                     | 1.0         | .2                  | .3         | .0              | 81.8       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | 1.1       | .0   | .0        | .0   | .0              | .0   | 1.1             | .0             | .0                      | .0          | .0                  | 1.1        | .0              | 97.8       |  |
| TOT PCT            | 1.5  | 2.7       | .8   | .0        | .0   | .0              | .1   | 5.0             | 3.3            | .9                      | .5          | *                   | .2         | *               | 90.2       |  |
| TOT OBS:           | 5465 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 0000          | 1.5                | 2.8          | .6   | .0           | .0   | .0                    | .0   | 4.8                     | 2.8               | 2.0          | .6             | .0                        | .2            | .0                              | 89.8             |
| 0600          | 1.7                | 3.3          | 1.2  | .0           | .0   | .0                    | .1   | 6.3                     | 2.7               | 1.2          | .7             | .0                        | .3            | .1                              | 89.1             |
| 1200          | 1.3                | 2.2          | .5   | .0           | .0   | .0                    | .1   | 4.1                     | 4.0               | .0           | .2             | .0                        | .3            | .0                              | 91.4             |
| 1800          | 1.5                | 2.5          | .7   | .0           | .0   | .0                    | .0   | 4.7                     | 3.4               | .3           | .3             | .1                        | .1            | .1                              | 91.1             |
| TOT PCT       | 1.5                | 2.7          | .8   | .0           | .0   | .0                    | .1   | 5.0                     | 3.2               | .9           | .4             | *                         | .2            | *                               | 90.4             |
| TOT OBS:      | 5588               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    |
| N        | 1.1                | 7.6  | 9.5   | 2.5   | .4    | *   |       | 21.1      | 13.3     |          | 22.4       | 30.1  | 21.3  | 17.3  | 20.7  | 25.2  |
| NE       | 1.2                | 13.2 | 16.5  | 3.3   | .4    | *   |       | 34.6      | 13.0     |          | 34.1       | 37.6  | 36.4  | 32.6  | 35.0  | 43.6  |
| E        | .9                 | 6.0  | 4.0   | .5    | *     | .0  |       | 11.4      | 10.3     |          | 10.2       | 10.7  | 11.2  | 13.5  | 12.2  | 7.0   |
| SE       | .4                 | 2.4  | 1.2   | .1    | *     | .0  |       | 4.1       | 10.0     |          | 4.1        | 1.9   | 3.5   | 5.3   | 4.2   | 1.6   |
| S        | .5                 | 2.2  | 1.3   | .4    | .1    | *   |       | 4.4       | 11.2     |          | 4.2        | .6    | 3.9   | 5.2   | 4.8   | .4    |
| SW       | .5                 | 2.6  | 2.1   | .6    | .1    | *   |       | 5.9       | 12.3     |          | 5.4        | 1.1   | 5.8   | 7.3   | 6.1   | 3.5   |
| W        | .5                 | 2.6  | 2.5   | .5    | .2    | *   |       | 6.6       | 13.3     |          | 6.7        | 7.9   | 6.7   | 7.1   | 6.3   | 6.0   |
| NW       | .5                 | 4.1  | 3.5   | 1.2   | .2    | .1  |       | 9.6       | 13.3     |          | 10.6       | 9.2   | 8.8   | 9.4   | 9.1   | 12.8  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.1                |      |       |       |       |     |       | 2.1       | .0       |          | 2.4        | .9    | 2.4   | 2.2   | 1.7   | .0    |
| TOT OBS  | 782                | 4177 | 4182  | 974   | 141   | 13  | 10269 |           | 12.3     |          | 1978       | 117   | 2071  | 914   | 2157  | 129   |
| TOT PCT  | 7.6                | 40.7 | 40.7  | 9.5   | 1.4   | .1  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 03    | 06    | 12    |
| N        | 3.7                | 11.3 | 5.0   | 1.0   | *   |           | 21.1     | 13.3     | 22.8       | 20.1  | 21.0  | 21.1  |
| NE       | 5.5                | 19.8 | 8.1   | 1.2   | *   |           | 34.6     | 13.0     | 34.3       | 35.3  | 35.5  | 33.6  |
| E        | 3.3                | 6.5  | 1.5   | .2    | .0  |           | 11.4     | 10.3     | 10.3       | 11.9  | 11.9  | 11.4  |
| SE       | 1.4                | 2.1  | .5    | .1    | *   |           | 4.1      | 10.0     | 4.0        | 4.1   | 4.0   | 4.4   |
| S        | 1.6                | 1.7  | .9    | .2    | *   |           | 4.4      | 11.2     | 4.0        | 4.3   | 4.5   | 4.7   |
| SW       | 1.6                | 2.8  | 1.2   | .3    | .1  |           | 5.9      | 12.3     | 5.1        | 6.3   | 5.9   | 6.1   |
| W        | 1.5                | 3.2  | 1.6   | .4    | .1  |           | 6.6      | 13.3     | 6.8        | 6.8   | 6.2   | 6.7   |
| NW       | 2.0                | 4.8  | 2.2   | .5    | .1  |           | 9.6      | 13.3     | 10.5       | 9.0   | 9.3   | 9.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 2.1                |      |       |       |     |           | 2.1      | .0       | 2.3        | 2.3   | 1.6   | 2.2   |
| TOT OBS  | 2326               | 5359 | 2159  | 391   | 34  | 10269     |          | 12.3     | 2095       | 2985  | 2286  | 2903  |
| TOT PCT  | 22.7               | 52.2 | 21.0  | 3.8   | .3  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

DECEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00603 | 2.3  | 6.0 | 41.1 | 39.1               | 9.5   | 1.8   | .2  | 12.3 | 100.0    | 2095      |
| 06009 | 2.3  | 5.7 | 41.7 | 40.2               | 8.9   | 1.1   | *   | 12.0 | 100.0    | 2985      |
| 12615 | 1.6  | 5.2 | 39.2 | 42.7               | 9.5   | 1.5   | .2  | 12.6 | 100.0    | 2286      |
| 18221 | 2.2  | 5.1 | 40.4 | 40.8               | 10.1  | 1.2   | .1  | 12.4 | 100.0    | 2903      |
| TOT   | 219  | 563 | 4177 | 4182               | 974   | 141   | 13  | 12.3 |          | 10269     |
| PCT   | 2.1  | 5.5 | 40.7 | 40.7               | 9.5   | 1.4   | .1  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 4.6  | 6.2  | 10.8 | 4.3          |              | 4.9                    |
| NE       | 10.2 | 7.5  | 14.3 | 8.0          |              | 4.6                    |
| E        | 3.4  | 1.4  | 2.7  | 1.2          |              | 3.9                    |
| SE       | .9   | .4   | .9   | .5           |              | 4.3                    |
| S        | .7   | .4   | 1.3  | .6           |              | 5.0                    |
| SW       | .7   | .7   | 1.6  | .6           |              | 5.0                    |
| W        | .9   | 1.3  | 2.3  | 1.2          |              | 5.0                    |
| NW       | 1.4  | 2.4  | 3.1  | 1.3          |              | 4.8                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .9   | .3   | .5   | .2           |              | 3.1                    |
| TOT OBS  | 1103 | 950  | 1726 | 827          | 4606         | 4.6                    |
| TOT PCT  | 23.9 | 20.6 | 37.5 | 18.0         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|    | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| .1 |            |            | .2         | 1.7        | 5.3          | 3.9          | 1.1          | .3           | *            | .1    | 13.3               |              |
| *  | .0         |            | .2         | 2.5        | 7.7          | 5.7          | 2.0          | .5           | .2           | .2    | 21.0               |              |
| *  | .0         |            | *          | .5         | .7           | 1.0          | .5           | .2           | *            | .1    | 5.7                |              |
| .0 | .0         |            | .0         | .1         | .4           | .3           | .1           | .1           | *            | .1    | 1.8                |              |
| .0 | .0         |            | *          | .1         | .5           | .3           | .2           | .1           | .1           | *     | 1.7                |              |
| .0 | *          |            | *          | .2         | .5           | .6           | .2           | .1           | .0           | .0    | 2.1                |              |
| *  |            | .1         | .2         | .4         | 1.1          | .5           | .2           | .1           | .0           | *     | 3.1                |              |
| *  | *          |            | .1         | .4         | 1.2          | 1.1          | .4           | *            | .1           | .1    | 4.8                |              |
| .0 |            | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| .0 | .0         |            | .0         | *          | .1           | .2           | .1           | .0           | .0           | .0    | 1.3                |              |
| 10 | 4          | 37         | 272        | 810        | 624          | 223          | 54           | 18           | 30           | 2524  | 4606               |              |
| .2 | .1         | .8         | 5.9        | 17.6       | 13.5         | 4.8          | 1.2          | .4           | .7           | 54.8  | 100.0              |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.0       | 1.0  | 1.1  | 1.1  | 1.1  | 1.1  | 1.1   | 1.1  |
| >5000             | 2.1       | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3   | 2.3  |
| >3500             | 6.4       | 7.1  | 7.1  | 7.1  | 7.1  | 7.1  | 7.1   | 7.1  |
| >2000             | 18.7      | 20.3 | 20.6 | 20.6 | 20.6 | 20.6 | 20.6  | 20.6 |
| >1000             | 34.2      | 37.6 | 37.9 | 38.0 | 38.0 | 38.0 | 38.0  | 38.0 |
| >600              | 39.3      | 43.4 | 43.8 | 43.9 | 43.9 | 43.9 | 43.9  | 43.9 |
| >300              | 39.9      | 44.2 | 44.6 | 44.7 | 44.7 | 44.7 | 44.7  | 44.7 |
| >150              | 39.9      | 44.3 | 44.7 | 44.8 | 44.8 | 44.8 | 44.8  | 44.8 |
| >0                | 40.0      | 44.4 | 44.9 | 44.9 | 45.0 | 45.0 | 45.0  | 45.0 |
| TOTAL             | 1871      | 2078 | 2100 | 2103 | 2106 | 2106 | 2107  | 2107 |

TOTAL NUMBER OF OBS: 4679

PCT FREQ NH <5/8: 55.0

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1   | 2    | 3    | 4    | 5   | 6    | 7    | 8    | OBSCD | TOTAL<br>OBS |
|--|------|-----|------|------|------|-----|------|------|------|-------|--------------|
|  | 10.9 | 9.2 | 11.2 | 12.1 | 11.1 | 8.7 | 11.0 | 10.8 | 14.9 | .1    | 4973         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

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AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |  |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|--------------|--|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |              |  |
|              | NO PCP | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |              |  |
|              | TOT %  | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |              |  |
| 1/2<1        | PCP    | *    | *    | *   | .0  | .0  | .0  | .1  | *   | .0  | .0   | .1   |              |  |
|              | NO PCP | *    | *    | .0  | *   | *   | .0  | .1  | *   | .0  | .0   | .2   |              |  |
|              | TOT %  | *    | *    | *   | *   | *   | .0  | .2  | .1  | .0  | .0   | .3   |              |  |
| 1<2          | PCP    | *    | .0   | .0  | .0  | .0  | *   | .0  | .0  | .0  | .0   | *    |              |  |
|              | NO PCP | *    | *    | .0  | .0  | .0  | .0  | .0  | *   | .0  | .0   | *    |              |  |
|              | TOT %  | *    | *    | .0  | .0  | .0  | *   | .0  | *   | .0  | .0   | .1   |              |  |
| 2<5          | PCP    | *    | *    | *   | .0  | .0  | *   | *   | .1  | .0  | .0   | .2   |              |  |
|              | NO PCP | .2   | .2   | .1  | *   | *   | .1  | *   | .1  | .0  | .0   | .8   |              |  |
|              | TOT %  | .2   | .2   | .1  | *   | *   | .1  | .1  | .2  | .0  | .0   | 1.0  |              |  |
| 5<10         | PCP    | .3   | .4   | .1  | .1  | .2  | .2  | .4  | .3  | .0  | .0   | 2.0  |              |  |
|              | NO PCP | 2.5  | 3.2  | .9  | .5  | .6  | .8  | .7  | 1.2 | .0  | .3   | 10.7 |              |  |
|              | TOT %  | 2.9  | 3.6  | 1.1 | .6  | .8  | 1.0 | 1.1 | 1.5 | .0  | .3   | 12.7 |              |  |
| 10+          | PCP    | .8   | .8   | .2  | .1  | *   | .1  | .2  | .4  | .0  | *    | 2.7  |              |  |
|              | NO PCP | 21.7 | 34.1 | 7.7 | 2.3 | 2.6 | 2.8 | 4.4 | 6.2 | .0  | 1.4  | 83.2 |              |  |
|              | TOT %  | 22.5 | 34.9 | 7.9 | 2.4 | 2.6 | 2.9 | 4.7 | 6.6 | .0  | 1.4  | 85.9 |              |  |
| TOT OBS      |        |      |      |     |     |     |     |     |     |     |      |      |              | 5454   |
| TOT PCT      |        |      |      |     |     |     |     |     |     |     |      |      |              | 25.7 38.8 9.2 3.0 3.4 4.0 5.9 8.4 .0 1.7 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                   |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|--|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0  | .0  | .0   | *    |  |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | 11-21      | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |  |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | TOT %      | .0   | *    | *   | .0  | .0  | *   | .0  | .0  | .0  | .0   | .1   |  |
| 1/2<1        | 0-3        | .0   | .0   | .0  | *   | *   | .0  | .0  | .0  | .0  | .0   | *    |  |
|              | 4-10       | *    | *    | .0  | .0  | .0  | .0  | .0  | *   | .0  | *    | *    |  |
|              | 11-21      | *    | *    | *   | .0  | .0  | .1  | *   | *   | .0  | *    | .1   |  |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | *   | *   | .0  | .0   | .1   |  |
|              | TOT %      | *    | *    | *   | *   | *   | .0  | .1  | *   | .0  | .0   | .2   |  |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | 4-10       | *    | *    | .0  | .0  | *   | *   | .0  | .0  | .0  | .0   | .1   |  |
|              | 11-21      | *    | .0   | *   | .0  | .0  | .0  | *   | .0  | .0  | .0   | *    |  |
|              | 22+        | *    | *    | .0  | .0  | *   | *   | .0  | .0  | .0  | .0   | .1   |  |
|              | TOT %      | *    | *    | *   | .0  | *   | *   | .0  | *   | .0  | .0   | .2   |  |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | *   | .0  | .0  | *    | *    |  |
|              | 4-10       | .1   | .1   | *   | *   | .0  | *   | *   | .1  | .0  | .0   | .3   |  |
|              | 11-21      | .1   | .1   | .1  | *   | *   | .1  | *   | .1  | .0  | .0   | .5   |  |
|              | 22+        | *    | *    | *   | *   | .1  | .1  | *   | .1  | .0  | .0   | .3   |  |
|              | TOT %      | .2   | .2   | .1  | *   | .1  | .2  | .1  | .2  | .0  | *    | 1.2  |  |
| 5<10         | 0-3        | .1   | .1   | .1  | *   | .1  | .1  | *   | .0  | .0  | .2   | .8   |  |
|              | 4-10       | .9   | 1.1  | .4  | .2  | .3  | .4  | .3  | .6  | .0  | .0   | 4.4  |  |
|              | 11-21      | 1.0  | 1.6  | .4  | .2  | .3  | .3  | .5  | .0  | .0  | .0   | 4.6  |  |
|              | 22+        | .4   | .3   | *   | *   | .1  | .2  | .4  | .3  | .0  | .0   | 1.8  |  |
|              | TOT %      | 2.4  | 3.2  | .9  | .5  | .7  | 1.1 | 1.1 | 1.3 | .0  | .2   | 11.5 |  |
| 10+          | 0-3        | .8   | .9   | .7  | .3  | .3  | .3  | .3  | .3  | .0  | 1.6  | 5.6  |  |
|              | 4-10       | 7.1  | 12.4 | 4.6 | 1.8 | 1.8 | 1.7 | 2.3 | 3.3 | .0  | .0   | 35.0 |  |
|              | 11-21      | 9.7  | 16.1 | 3.3 | .9  | .9  | 1.6 | 2.2 | 2.9 | .0  | .0   | 37.6 |  |
|              | 22+        | 2.7  | 3.5  | .3  | *   | .2  | .4  | .5  | 1.0 | .0  | .0   | 8.8  |  |
|              | TOT %      | 20.4 | 32.9 | 8.9 | 3.0 | 3.2 | 4.1 | 5.2 | 7.6 | .0  | 1.6  | 86.9 |  |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |      | 7687   |
| TOT PCT      |            |      |      |     |     |     |     |     |     |     |      |      | 23.2 36.5 9.9 3.5 4.0 5.3 6.6 9.1 .0 1.9 100.0 |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

# DECEMBER

AREA 0003 CASABLANCA SM  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|--------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                    |              |
| 00003 | .5  | .1  | .8  | 5.7 | 15.0 | 11.5 | 3.9  | .9   | .6   | .5    | 39.5  | 60.5               | 1110         |
| 06009 | .3  | .1  | .7  | 5.4 | 18.0 | 12.6 | 4.6  | 1.6  | .4   | 1.0   | 44.7  | 55.3               | 1204         |
| 12015 | .1  | .1  | .8  | 5.8 | 16.9 | 12.6 | 5.2  | 1.2  | .3   | .6    | 43.6  | 56.4               | 1316         |
| 18021 | .0  | .1  | .8  | 6.1 | 17.7 | 15.7 | 5.3  | 1.1  | .2   | .5    | 47.5  | 52.5               | 1196         |
| TOT   | 10  | 4   | 38  | 277 | 819  | 634  | 229  | 98   | 18   | 32    | 2119  | 2707               | 4826         |
| PCT   | .2  | .1  | .8  | 5.7 | 17.0 | 13.1 | 4.7  | 1.2  | .4   | .7    | 43.9  | 56.1               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|-------|------|-------|-----|-----|------|------|--------------|
| (GMT) |      |       |     |     |      |      |              |
| 00003 | .1   | .3    | .2  | 1.2 | 12.3 | 86.0 | 1710         |
| 06009 | .1   | .3    | .2  | 1.4 | 12.9 | 85.0 | 2150         |
| 12015 | .0   | .2    | .1  | .9  | 8.7  | 90.2 | 1866         |
| 18021 | *    | .1    | .1  | 1.1 | 12.4 | 86.2 | 2084         |
| TOT   | 4    | 18    | 12  | 91  | 907  | 4778 | 7810         |
| PCT   | .1   | .2    | .2  | 1.2 | 11.6 | 86.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HR    | <150<br><500D | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|-------|---------------|------------|-------------|-----------------|-------------------|--------------|
| (GMT) |               |            |             |                 |                   |              |
| 00003 | .5            | 1.4        | 8.0         | 32.9            | 59.1              | 1073         |
| 06009 | .3            | 1.2        | 7.5         | 39.2            | 53.3              | 1156         |
| 12015 | .1            | 1.1        | 7.6         | 37.0            | 55.4              | 1293         |
| 18021 | .0            | 1.1        | 8.2         | 41.0            | 50.8              | 1157         |
| TOT   | 10            | 56         | 366         | 1759            | 2554              | 4679         |
| PCT   | .2            | 1.2        | 7.8         | 37.6            | 54.6              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .0    | .1    | .0    | .0    | .0     | 3            | .1          |
| 70/74  | .0   | .0    | .0    | .1    | .7    | .7    | .4    | .2     | 98           | 2.2         |
| 65/69  | *    | *     | .1    | 1.6   | 7.7   | 11.1  | 6.7   | 3.2    | 1379         | 30.4        |
| 60/64  | .0   | .0    | .3    | 4.6   | 17.1  | 20.3  | 12.9  | 5.0    | 2736         | 60.3        |
| 55/59  | .0   | .0    | .2    | .7    | 1.5   | 1.9   | 1.4   | 1.2    | 314          | 6.9         |
| 50/54  | .0   | .0    | .0    | .0    | *     | .1    | *     | *      | 9            | .2          |
| TOTAL  | 1    | 1     | 30    | 320   | 1230  | 1549  | 973   | 435    | 4539         | 100.0       |
| PCT    | *    | *     | .7    | 7.1   | 27.1  | 34.1  | 21.4  | 9.6    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N     | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|------|
| 75/79 | *    | .0   | .0  | *   | .0  | .0  | *   | .0  | .0   |
| 70/74 | .4   | .7   | .1  | .2  | .2  | .3  | .1  | .1  | *    |
| 65/69 | 5.8  | 11.6 | 3.5 | 1.3 | 1.6 | 2.1 | 1.8 | 2.0 | .6   |
| 60/64 | 16.8 | 25.8 | 5.3 | 1.4 | 1.3 | 1.1 | 3.2 | 4.7 | .7   |
| 55/59 | 2.6  | 1.8  | .5  | .1  | .1  | .2  | .5  | .9  | .1   |
| 50/54 | .1   | *    | *   | .0  | *   | .0  | *   | *   | .0   |
| TOTAL | 25.9 | 39.9 | 9.4 | 3.0 | 3.2 | 3.7 | 5.6 | 7.8 | 1.5  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|----|----|-----|------|--------------|
| (GMT) |     |     |     |     |    |    |     |      |              |
| 00003 | 73  | 69  | 67  | 63  | 59 | 55 | 45  | 63.0 | 2117         |
| 06009 | 73  | 68  | 67  | 63  | 58 | 55 | 46  | 62.9 | 2998         |
| 12015 | 79  | 73  | 70  | 65  | 60 | 57 | 50  | 65.2 | 2261         |
| 18021 | 77  | 72  | 69  | 64  | 59 | 56 | 46  | 64.0 | 2897         |
| TOT   | 79  | 71  | 69  | 64  | 59 | 55 | 45  | 63.7 | 10273        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|-------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| (GMT) |      |       |       |       |       |       |       |        |      |              |
| 00003 | .0   | 6.9   | 23.9  | 36.2  | 22.4  | 10.6  | 75    | 1113   |      |              |
| 06009 | .0   | 6.8   | 24.4  | 34.6  | 23.1  | 11.1  | 75    | 1201   |      |              |
| 12015 | .1   | 10.6  | 31.4  | 33.1  | 17.1  | 7.8   | 72    | 1194   |      |              |
| 18021 | .0   | 6.3   | 27.9  | 33.0  | 23.8  | 9.0   | 75    | 1133   |      |              |
| TOT   | 1    | 356   | 1250  | 1587  | 1001  | 446   | 74    | 4641   |      |              |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | .1       | 7     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | *        | *        | .1       | .1       | *        | 13    | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .0       | *        | 17    | .0       | .3        |
| 6                  | .0       | .0       | .0       | .0       | .0       | .1       | *        | .1       | .0       | 10    | .0       | .2        |
| 5                  | .0       | .0       | .0       | *        | .2       | .2       | .4       | .1       | .0       | 46    | .0       | .9        |
| 4                  | .0       | .0       | .0       | *        | .2       | .7       | .4       | .0       | .0       | 68    | *        | 1.3       |
| 3                  | .0       | .0       | .0       | .0       | .3       | .7       | .4       | .0       | .0       | 66    | *        | 1.3       |
| 2                  | .0       | .0       | *        | .1       | .6       | 1.6      | .7       | *        | .0       | 157   | *        | 3.1       |
| 1                  | .0       | .0       | .0       | .2       | 1.1      | 2.8      | .6       | *        | .0       | 231   | *        | 4.6       |
| 0                  | .0       | .0       | *        | .4       | 4.4      | 5.5      | .5       | *        | .0       | 548   | .1       | 10.8      |
| -1                 | .0       | .0       | .0       | .4       | 7.6      | 6.2      | .2       | .0       | .0       | 728   | .1       | 14.4      |
| -2                 | .0       | .0       | *        | .9       | 11.3     | 4.8      | .1       | .0       | .0       | 860   | .1       | 17.1      |
| -3                 | .0       | .0       | *        | 1.3      | 10.8     | 2.9      | .1       | .0       | .0       | 754   | .1       | 15.0      |
| -4                 | .0       | .0       | .1       | 1.4      | 8.0      | 1.4      | *        | .0       | .0       | 549   | *        | 10.9      |
| -5                 | .0       | .0       | .1       | 2.5      | 5.2      | .8       | *        | .0       | .0       | 432   | .0       | 8.6       |
| -6                 | .0       | .0       | .1       | 1.6      | 2.0      | .2       | .0       | .0       | .0       | 200   | .0       | 4.0       |
| -7/-8              | .0       | *        | .3       | 1.9      | 1.7      | .3       | .0       | .0       | .0       | 210   | .0       | 4.2       |
| -9/-10             | .0       | .0       | .3       | .9       | .2       | *        | .0       | .0       | .0       | 65    | .0       | 1.3       |
| -11/-13            | .0       | .1       | .2       | .3       | .1       | .0       | .0       | .0       | .0       | 33    | .0       | .7        |
| -14/-16            | .0       | .1       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 14    | .0       | .3        |
| -17/-19            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | .1        |
| -20/-22            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| TOTAL              | 5        | 9        | 60       | 2702     | 1423     | 188      | 17       | 5        | 5013     | 24    | 4989     |           |
| PCT                | .1       | .2       | 1.2      | 12.0     | 53.9     | 28.4     | 3.8      | .3       | .1       | 100.0 | .5       | 99.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      | NE  |      |       |       |       |     |      |  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |
| <1      | .4  | .9   | *     | .0    | .0    | .0  | 1.4  | .3  | 1.6  | .2    | .0    | .0    | .0  | 2.3  |  |
| 1-2     | .1  | 5.1  | 1.9   | .0    | .0    | .0  | 7.1  | .3  | 8.9  | 3.3   | .0    | .0    | .0  | 12.4 |  |
| 3-4     | .0  | 2.2  | 4.4   | .3    | .0    | .0  | 6.9  | .0  | 3.5  | 7.1   | .7    | .0    | .0  | 11.3 |  |
| 5-6     | .1  | .5   | 4.3   | 1.2   | .1    | .0  | 6.2  | .0  | 1.2  | 5.9   | 1.1   | *     | .0  | 8.2  |  |
| 7       | .0  | .1   | 1.9   | 1.3   | .1    | .0  | 3.3  | .0  | .1   | 2.3   | 1.0   | .1    | .0  | 3.5  |  |
| 8-9     | .0  | .2   | .6    | .7    | .2    | .0  | 1.7  | .1  | .1   | .6    | .7    | .2    | .0  | 1.8  |  |
| 10-11   | .0  | *    | .2    | .2    | .1    | .0  | .5   | .0  | .0   | .1    | .4    | *     | .0  | .5   |  |
| 12      | .0  | .0   | *     | .2    | .1    | .0  | .3   | .0  | .0   | .0    | .3    | .1    | .0  | .4   |  |
| 13-16   | .0  | .0   | .1    | .3    | .1    | .0  | .5   | .0  | .0   | .1    | .2    | .1    | *   | .4   |  |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | *     | .0  | .1   |  |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 23-25   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| TOT PCT | .6  | 9.0  | 13.3  | 4.3   | .7    | .0  | 28.0 | .7  | 15.6 | 19.7  | 4.4   | .6    | *   | 40.9 |  |

| E       |     |      |       |       |       |     |     | SE  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .5  | .8   | *     | .0    | .0    | .0  | 1.3 | .1  | .3   | *     | .0    | .0    | .0  | .4  |  |
| 1-2     | .1  | 2.3  | .7    | .0    | .0    | .0  | 3.2 | .1  | .9   | .2    | .0    | .0    | .0  | 1.2 |  |
| 3-4     | .0  | 1.0  | 1.1   | *     | .0    | .0  | 2.2 | .0  | .2   | .3    | .0    | .0    | .0  | .5  |  |
| 5-6     | .0  | .3   | .6    | *     | *     | .0  | 1.0 | .0  | .1   | .1    | .0    | .0    | .0  | .2  |  |
| 7       | .0  | .1   | .2    | *     | .0    | .0  | .3  | .0  | *    | *     | *     | .0    | .0  | .1  |  |
| 8-9     | .0  | *    | *     | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | *   | .0  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .6  | 4.5  | 2.7   | .2    | *     | .0  | 8.1 | .2  | 1.4  | .7    | *     | *     | *   | 2.3 |  |

PERIOD: (OVER-ALL) 1963-1973

DECEMBER

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .2  | .6   | *     | .0    | .0    | .0  |     | .9  | .1  | .1   | *     | .0    | .0    | .0  |  | .3  |
| 1-2     | .1  | .8   | .1    | .0    | .0    | .0  | 1.0 |     | .1  | .7   | .2    | .0    | .0    | .0  |  | 1.0 |
| 3-4     | .0  | .3   | .3    | .0    | .0    | .0  |     | .6  | .0  | .2   | .4    | *     | .0    | .0  |  | .6  |
| 5-6     | .0  | *    | .1    | *     | .0    | .0  |     | .1  | .0  | .0   | .1    | *     | .0    | .0  |  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .1   | .1    | *     | .0    | .0  |  | .2  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  |     | *   | .0  | .0   | .0    | .1    | *     | .0  |  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | *     | .1    | .0  |  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | *     | *     | .0  |  | .1  |
| 13-16   | .0  | .0   | .0    | .0    | *     | .0  | *   |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |     | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .3  | 1.7  | .5    | *     | *     | .0  | 2.6 |     | .2  | 1.2  | .8    | .3    | .1    | .0  |  | 2.6 |

| HGT     | W   |      |       |       |       |     |     | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .1  | .3   | .1    | .0    | .0    | .0  |     | .5  | .3  | .4   | *     | .0    | .0    | .0  |  | .7  |           |
| 1-2     | .1  | 1.0  | .4    | .0    | .0    | .0  | 1.5 |     | *   | 1.9  | .5    | .0    | .0    | .0  |  | 2.4 |           |
| 3-4     | *   | .7   | .7    | *     | .0    | .0  | 1.5 |     | .0  | .6   | 1.1   | .1    | .0    | .0  |  | 1.8 |           |
| 5-6     | .0  | *    | .4    | .2    | .0    | .0  | .6  |     | *   | .3   | 1.0   | .2    | .0    | .0  |  | 1.5 |           |
| 7       | .0  | .0   | .2    | .2    | .0    | .0  | .4  |     | .0  | .0   | .4    | .1    | .0    | .0  |  | .5  |           |
| 8-9     | .0  | .0   | .1    | .1    | *     | .0  | .2  |     | .0  | .1   | .1    | .2    | .1    | .0  |  | .5  |           |
| 10-11   | .0  | .0   | .1    | .2    | .0    | *   | .3  |     | .0  | *    | *     | .1    | *     | .0  |  | .2  |           |
| 12      | .0  | .0   | .1    | .1    | *     | .0  | .2  |     | .0  | .0   | .0    | .1    | *     | .0  |  | .1  |           |
| 13-16   | .0  | .0   | .0    | .0    | .1    | .0  | .1  |     | .0  | .0   | .1    | *     | .1    | .0  |  | .2  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | *     | *     | .0  |  | .1  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | *     | .0  |  | *   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | *     | .0  |  | *   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .2  | 2.1  | 2.0   | .7    | .1    | *   | 5.2 |     | .3  | 3.3  | 3.2   | .9    | .3    | .0  |  | 8.0 | 97.7      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 5.2 | 5.3  | .4    | .0    | .0    | .0  | 10.8  |         |
| 1-2     | 1.1 | 21.3 | 7.1   | .0    | .0    | .0  | 29.5  |         |
| 3-4     | .1  | 8.6  | 15.3  | 1.1   | .0    | .0  | 25.1  |         |
| 5-6     | .1  | 2.4  | 12.5  | 2.7   | .1    | .0  | 17.8  |         |
| 7       | .0  | .4   | 5.0   | 2.7   | .2    | .0  | 8.2   |         |
| 8-9     | .1  | .4   | 1.5   | 1.8   | .5    | .0  | 4.3   |         |
| 10-11   | .0  | .1   | .3    | 1.1   | .2    | *   | 1.7   |         |
| 12      | .0  | .0   | .1    | .7    | .3    | .0  | 1.1   |         |
| 13-16   | .0  | .0   | .2    | .5    | .4    | *   | 1.2   |         |
| 17-19   | .0  | .0   | .0    | .1    | .1    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .1    | .0  | .1    |         |
| 23-25   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 6.5 | 38.3 | 42.4  | 10.8  | 1.9   | .1  | 100.0 | 2950    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.5 | 8.1  | 8.1  | 5.2  | 2.3  | 1.0 | .4    | .1  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 984   | 4        |
| 6-7          | *   | 1.1  | 4.9  | 6.9  | 5.5  | 2.7 | 1.3   | .5  | .5    | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 868   | 6        |
| 8-9          | *   | .4   | 2.2  | 3.1  | 3.7  | 1.9 | 1.7   | .9  | 1.0   | .4    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 564   | 7        |
| 10-11        | .0  | .4   | 1.1  | .8   | 1.6  | 1.4 | 1.1   | .7  | .7    | .4    | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 312   | 8        |
| 12-13        | .0  | .0   | .8   | .7   | .6   | .5  | .5    | .4  | .5    | *     | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 154   | 8        |
| >13          | .0  | .0   | .0   | .4   | .2   | .2  | .4    | .2  | .1    | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 62    | 9        |
| INDET        | 3.1 | 3.4  | 4.1  | 3.1  | 2.5  | 1.6 | .6    | .2  | .5    | .1    | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 718   | 5        |
| TOTAL        | 171 | 491  | 774  | 738  | 606  | 345 | 220   | 106 | 128   | 48    | 22    | 6     | 7     | 0     | 0     | 0     | 0     | 0     | 0   | 3662  | 6        |
| PCT          | 4.7 | 13.4 | 21.1 | 20.2 | 16.5 | 9.4 | 6.0   | 2.9 | 3.5   | 1.3   | .6    | .2    | .2    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
|                    |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |
| N                  | .6   | 1.3       | .5   | .0        | .0   | .0              | *    | 2.4             | 1.7            | .4                      | 1.1         | *                   | 1.1        | *               | 93.3       |
| NE                 | .4   | .7        | .3   | .0        | .0   | .0              | *    | 1.4             | .9             | .3                      | 1.1         | *                   | 1.1        | *               | 95.1       |
| E                  | .8   | .8        | .5   | .0        | .0   | .0              | .0   | 2.2             | 1.4            | .9                      | 2.1         | .3                  | 1.5        | *               | 91.8       |
| SE                 | 3.2  | 1.5       | .9   | .0        | .0   | .0              | .1   | 5.6             | 2.5            | 1.5                     | 3.4         | .2                  | 2.6        | .1              | 84.2       |
| S                  | 3.0  | 2.3       | .7   | .0        | .0   | .0              | *    | 6.0             | 2.4            | 2.1                     | 1.4         | .0                  | .7         | *               | 87.9       |
| SW                 | 1.7  | 2.6       | .9   | .0        | .0   | .0              | .0   | 5.2             | 3.2            | 1.2                     | 1.2         | .0                  | 1.0        | *               | 88.3       |
| W                  | 1.6  | 2.5       | .9   | .0        | .0   | .0              | *    | 5.0             | 3.4            | 1.1                     | 1.2         | .0                  | .9         | *               | 88.6       |
| NW                 | 1.1  | 2.2       | .6   | .0        | .0   | .0              | *    | 3.9             | 2.8            | .7                      | 1.3         | .1                  | 1.2        | *               | 90.1       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .5   | .5        | .2   | .0        | .0   | .0              | .1   | 1.3             | .6             | .6                      | 3.6         | .1                  | 2.5        | .0              | 91.3       |
| TOT PCT            | .9   | 1.3       | .5   | .0        | .0   | .0              | *    | 2.7             | 1.8            | .7                      | 1.2         | *                   | 1.2        | *               | 92.3       |
| TOT OBS: 63241     |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)  | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                       |              |                  |
|----------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-----------------------|--------------|------------------|
|                | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00603          | 1.0                | 1.2          | .6   | .0           | .0   | .0                    | *    | 2.8                     | 1.7               | 1.5          | 1.1               | *                         | 1.0           | *                     |              | 91.9             |
| 06609          | 1.1                | 1.7          | .8   | .0           | .0   | .0                    | *    | 3.6                     | 1.9               | 1.1          | 1.4               | *                         | .9            | .1                    |              | 91.1             |
| 12015          | .8                 | 1.1          | .4   | .0           | .0   | .0                    | *    | 2.3                     | 1.9               | .1           | 1.1               | *                         | 1.4           | *                     |              | 93.2             |
| 18021          | .8                 | 1.2          | .4   | .0           | .0   | .0                    | *    | 2.4                     | 1.7               | .3           | 1.3               | *                         | 1.4           | *                     |              | 92.9             |
| TOT PCT        | .9                 | 1.3          | .6   | .0           | .0   | .0                    | *    | 2.8                     | 1.8               | .7           | 1.2               | *                         | 1.2           | *                     |              | 92.3             |
| TOT OBS: 64983 |                    |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                       |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |        | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|--------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |        |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.2                | 13.1 | 15.2  | 2.5   | .1    | *   |        | 32.1      | 12.4     | 32.5     | 34.6       | 31.9  | 30.4  | 31.5  | 35.0  | 33.7  | 30.9  |    |
| NE       | .9                 | 11.1 | 15.8  | 3.1   | .1    | *   |        | 31.0      | 13.2     | 30.8     | 28.0       | 31.2  | 32.9  | 31.7  | 28.4  | 29.6  | 31.3  |    |
| E        | .4                 | 2.8  | 1.8   | .2    | *     | *   |        | 5.2       | 9.9      | 5.0      | 5.6        | 5.2   | 6.2   | 5.4   | 4.7   | 4.7   | 5.6   |    |
| SE       | .3                 | 1.4  | .8    | .1    | *     | *   |        | 2.7       | 8.7      | 2.6      | 2.8        | 2.6   | 2.7   | 2.9   | 2.3   | 2.5   | 2.6   |    |
| S        | .4                 | 1.6  | 1.2   | .3    | *     | *   |        | 3.5       | 9.9      | 3.6      | 3.5        | 3.5   | 3.1   | 3.9   | 3.5   | 3.6   | 2.9   |    |
| SW       | .5                 | 2.7  | 2.2   | .6    | .1    | *   |        | 6.0       | 10.6     | 5.7      | 5.0        | 6.0   | 5.5   | 6.5   | 5.8   | 6.2   | 5.6   |    |
| W        | .6                 | 3.6  | 2.2   | .6    | .1    | *   |        | 7.1       | 10.2     | 7.1      | 7.5        | 7.0   | 7.1   | 6.8   | 9.6   | 7.2   | 7.7   |    |
| NW       | .7                 | 5.6  | 3.1   | .8    | .1    | *   |        | 10.3      | 10.6     | 10.1     | 11.1       | 10.1  | 10.5  | 9.5   | 10.3  | 10.6  | 11.5  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |        | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 2.1                |      |       |       |       |     |        | 2.1       | .0       | 2.5      | 2.0        | 2.5   | 1.6   | 1.9   | 1.4   | 1.7   | 1.9   |    |
| TOT OBS  |                    |      |       |       |       |     | 118499 |           | 11.9     | 22992    | 1488       | 23194 | 10778 | 24458 | 1635  | 23493 | 10461 |    |
| TOT PCT  | 7.1                | 41.9 | 42.3  | 8.1   | .6    | *   |        | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 5.5                | 18.6 | 7.3   | .7    | *   |           | 32.1     | 12.4     | 32.7       | 31.4  | 31.7  | 32.8  |    |
| NE       | 4.3                | 17.5 | 8.3   | .8    | *   |           | 31.0     | 13.2     | 30.6       | 31.8  | 31.4  | 30.3  |    |
| E        | 1.6                | 2.9  | .7    | .1    | *   |           | 5.2      | 9.9      | 5.0        | 5.5   | 5.3   | 5.0   |    |
| SE       | .9                 | 1.3  | .4    | *     | *   |           | 2.7      | 8.7      | 2.7        | 2.6   | 2.8   | 2.5   |    |
| S        | 1.1                | 1.7  | .6    | .1    | *   |           | 3.5      | 9.9      | 3.6        | 3.3   | 3.9   | 3.4   |    |
| SW       | 1.6                | 2.9  | 1.2   | .2    | *   |           | 6.0      | 10.6     | 5.6        | 5.8   | 6.5   | 6.0   |    |
| W        | 2.2                | 3.5  | 1.2   | .3    | *   |           | 7.1      | 10.2     | 7.1        | 7.0   | 6.9   | 7.4   |    |
| NW       | 3.1                | 5.4  | 1.5   | .3    | *   |           | 10.3     | 10.6     | 10.2       | 10.2  | 9.6   | 10.9  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.1                |      |       |       |     |           | 2.1      | .0       | 2.5        | 2.2   | 1.9   | 1.8   |    |
| TOT OBS  |                    |      |       |       |     | 118499    |          | 11.9     | 24480      | 33972 | 26093 | 33934 |    |
| TOT PCT  | 22.5               | 53.8 | 21.2  | 2.4   | .1  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |       |          |           |
| 00003 | 2.5  | 4.9 | 42.5 | 41.9               | 7.6   | .6    | *  | 11.7  | 100.0    | 24480     |
| 06009 | 2.2  | 5.3 | 43.7 | 40.8               | 7.4   | .5    | *  | 11.5  | 100.0    | 33972     |
| 12015 | 1.9  | 4.9 | 40.0 | 44.0               | 8.6   | .6    | *  | 12.2  | 100.0    | 26093     |
| 18021 | 1.8  | 4.9 | 41.2 | 42.9               | 8.6   | .6    | *  | 12.1  | 100.0    | 33954     |
| TOT   |      |     |      |                    |       |       |    | 11.9  |          | 118499    |
| PCT   | 2.1  | 5.0 | 41.9 | 42.3               | 8.1   | .6    | *  | 100.0 |          |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
|          |      |      |      |           |           |                  |
| N        | 10.3 | 8.0  | 11.1 | 5.5       |           | 4.2              |
| NE       | 8.9  | 6.5  | 9.5  | 4.2       |           | 4.2              |
| E        | 1.6  | .8   | 1.3  | .6        |           | 4.1              |
| SE       | .8   | .4   | .8   | .5        |           | 4.7              |
| S        | 1.0  | .8   | 1.4  | .8        |           | 4.5              |
| SW       | 1.7  | 1.4  | 2.2  | 1.1       |           | 4.3              |
| W        | 1.9  | 1.8  | 2.2  | .9        |           | 4.1              |
| NW       | 2.8  | 2.7  | 3.0  | 1.2       |           | 4.1              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | .9   | .4   | .5   | .3        |           | 3.5              |
| TOT OBS  |      |      |      |           | 52570     | 4.2              |
| TOT PCT  | 29.9 | 22.8 | 32.1 | 15.2      | 100.0     |                  |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION |     |     |     |      |      |      |      |      |       |         |       |
|---|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 000   | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
| 149   | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .1  | *   | .3  | 1.7 | 5.5  | 3.9  | 1.6  | .4   | .2   | .2    | 20.9    |       |
| *   | .2  | 1.3 | 4.2 | 3.4  | 1.5  | .4   | .1   | .2   | .2    | 17.7    |       |
| *   | *   | *   | .2  | .4   | .5   | .2   | .1   | *    | .1    | 3.0     |       |
| *   | *   | .1  | .3  | .2   | .1   | *    | *    | *    | *     | 1.6     |       |
| *   | *   | .2  | .5  | .4   | .2   | .1   | *    | *    | .1    | 2.5     |       |
| *   | *   | .1  | .4  | .7   | .6   | .3   | .1   | *    | .1    | 4.1     |       |
| *   | *   | .1  | .4  | .8   | .6   | .2   | .1   | *    | .1    | 4.6     |       |
| *   | *   | .1  | .4  | 1.2  | .9   | .4   | .1   | *    | .1    | 6.5     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| *   | *   | *   | .1  | .2   | .2   | .1   | *    | *    | *     | 1.6     |       |
| .2  | .1  | .7  | 4.7 | 13.9 | 10.7 | 4.6  | 1.2  | .5   | .9    | 62.5    | 52570 |
|   |     |     |     |      |      |      |      |      |       |         | 100.0 |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |       |       |       | OR >1 | OR >1/2 | OR >1/4 | OR >50YD | OR >0 |
|----------------|-----------|-------|-------|-------|-------|---------|---------|----------|-------|
|                | OR >10    | OR >5 | OR >2 | OR >1 |       |         |         |          |       |
| OR >6500       | 1.1       | 1.4   | 1.4   | 1.4   | 1.4   | 1.5     | 1.5     | 1.5      |       |
| OR >5000       | 2.2       | 2.6   | 2.7   | 2.7   | 2.7   | 2.7     | 2.7     | 2.7      |       |
| OR >3500       | 6.0       | 7.1   | 7.2   | 7.2   | 7.2   | 7.2     | 7.2     | 7.2      |       |
| OR >2000       | 14.8      | 17.5  | 17.8  | 17.9  | 17.9  | 17.9    | 17.9    | 17.9     |       |
| OR >1000       | 26.2      | 31.1  | 31.6  | 31.7  | 31.7  | 31.7    | 31.7    | 31.7     |       |
| OR >600        | 29.7      | 35.5  | 36.3  | 36.3  | 36.4  | 36.4    | 36.4    | 36.4     |       |
| OR >300        | 30.1      | 36.1  | 36.9  | 37.0  | 37.1  | 37.1    | 37.1    | 37.1     |       |
| OR >150        | 30.2      | 36.2  | 37.0  | 37.1  | 37.2  | 37.2    | 37.2    | 37.2     |       |
| OR >0          | 30.2      | 36.3  | 37.2  | 37.3  | 37.3  | 37.3    | 37.4    | 37.4     |       |

TOTAL NUMBER OF OBS: 53602

PCT FREQ NH <5/8: 62.6

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL OBS |
|------|------|------|------|------|-----|-----|-----|------|-------|-----------|
| 13.9 | 11.0 | 13.8 | 13.1 | 10.2 | 7.4 | 8.8 | 9.0 | 12.6 | .1    | 56725     |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | *    | .0   | .0  | .0  | .0  | *   | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | TOT %  | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
| 1/2<1        | PCP    | *    | *    | *   | .0  | *   | *   | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
|              | TOT %  | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
| 1<2          | PCP    | *    | *    | .0  | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | NO PCP | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
|              | TOT %  | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
| 2<5          | PCP    | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
|              | NO PCP | .5   | .3   | .1  | *   | .1  | .1  | .1  | .1  | .0  | *    | 1.3   |              |
|              | TOT %  | .5   | .3   | .1  | .1  | .1  | .2  | .1  | .2  | .0  | .1   | 1.6   |              |
| 5<10         | PCP    | .2   | .2   | .1  | .1  | .1  | .2  | .2  | .2  | .0  | *    | 1.3   |              |
|              | NO PCP | 6.0  | 4.7  | .7  | .5  | .7  | 1.1 | 1.2 | 1.5 | .0  | .3   | 16.7  |              |
|              | TOT %  | 6.3  | 4.9  | .8  | .6  | .8  | 1.3 | 1.4 | 1.7 | .0  | .3   | 18.0  |              |
| 10+          | PCP    | .3   | .2   | *   | *   | .1  | .1  | .1  | .2  | .0  | *    | 1.1   |              |
|              | NO PCP | 27.1 | 23.5 | 3.6 | 2.0 | 3.1 | 4.8 | 5.4 | 7.7 | .0  | 1.6  | 78.6  |              |
|              | TOT %  | 27.4 | 23.6 | 3.6 | 2.0 | 3.1 | 4.9 | 5.6 | 7.8 | .0  | 1.6  | 79.7  |              |
| TOT OBS      |        |      |      |     |     |     |     |     |     |     |      |       | 63110        |
| TOT PCT      |        | 34.4 | 29.0 | 4.5 | 2.6 | 4.1 | 6.4 | 7.1 | 9.7 | .0  | 2.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | *   | .0  | *   | *   | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | 11-21      | *    | *    | *   | .0  | .0  | *   | .0  | *   | .0  | *    | *     |              |
|              | 22+        | *    | .0   | .0  | .0  | .0  | *   | *   | *   | .0  | *    | *     |              |
|              | TOT %      | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | *    | *    | *   | *   | *   | *   | *   | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | *    | *    | *   | .0  | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 22+        | *    | *    | .0  | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | TOT %      | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
| 1<2          | 0-3        | *    | *    | .0  | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | 4-10       | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | .1   | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 22+        | *    | *    | .0  | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | TOT %      | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
| 2<5          | 0-3        | *    | *    | *   | *   | *   | *   | *   | *   | .0  | .1   | .1    |              |
|              | 4-10       | .2   | .1   | *   | *   | *   | *   | .1  | .1  | .0  | *    | .5    |              |
|              | 11-21      | .2   | .2   | *   | *   | *   | .1  | *   | .1  | .0  | *    | .7    |              |
|              | 22+        | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
|              | TOT %      | .5   | .4   | .1  | .1  | .1  | .2  | .1  | .2  | .0  | .1   | 1.6   |              |
| 5<10         | 0-3        | .2   | .1   | .1  | *   | .1  | .1  | .1  | .1  | .0  | .3   | 1.0   |              |
|              | 4-10       | 2.0  | 1.6  | .4  | .2  | .3  | .5  | .6  | .7  | .0  | *    | 6.1   |              |
|              | 11-21      | 2.9  | 2.5  | .3  | .2  | .3  | .5  | .4  | .5  | .0  | *    | 7.5   |              |
|              | 22+        | .7   | .6   | *   | *   | .1  | .2  | .2  | .2  | .0  | *    | 2.1   |              |
|              | TOT %      | 5.7  | 4.8  | .7  | .5  | .7  | 1.2 | 1.3 | 1.5 | .0  | .3   | 16.7  |              |
| 10+          | 0-3        | .9   | .7   | .3  | .2  | .3  | .4  | .4  | .6  | .0  | 1.7  | 5.3   |              |
|              | 4-10       | 10.8 | 8.9  | 2.2 | 1.1 | 1.5 | 2.2 | 2.9 | 4.6 | .0  | *    | 34.1  |              |
|              | 11-21      | 13.2 | 13.2 | 1.4 | .6  | 1.1 | 1.8 | 1.8 | 2.4 | .0  | *    | 39.5  |              |
|              | 22+        | 2.1  | 2.3  | .1  | .1  | .2  | .4  | .4  | .6  | .0  | *    | 6.1   |              |
|              | TOT %      | 27.0 | 25.1 | 4.0 | 2.1 | 2.9 | 4.7 | 5.5 | 8.1 | .0  | 1.7  | 81.1  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |       | 88327        |
| TOT PCT      |            | 33.4 | 30.4 | 4.8 | 2.6 | 3.8 | 6.1 | 7.0 | 9.9 | .0  | 2.1  | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS   |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|----------------|
| 00003         | .3         | .1         | .7         | 4.4        | 12.6         | 8.7          | 3.7          | .9           | .5           | .7    | 32.5  | 67.5                | 12882          |
| 06009         | .3         | .2         | .8         | 5.4        | 16.7         | 12.4         | 5.0          | 1.5          | .5           | 1.0   | 43.8  | 56.2                | 13451          |
| 12015         | .1         | .1         | .6         | 4.2        | 12.5         | 10.5         | 4.7          | 1.4          | .6           | 1.0   | 35.8  | 64.2                | 14058          |
| 18021         | .1         | .1         | .6         | 4.2        | 12.1         | 9.9          | 4.3          | .9           | .5           | .8    | 33.6  | 66.4                | 14145          |
| TOT<br>PCT    | .2         | .1         | .7         | 4.5        | 13.4         | 10.4         | 4.5          | 1.2          | .5           | .9    | 36.4  | 63.6                | 55336<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS   |
|---------------|------|-------|-----|-----|------|------|----------------|
| 00003         | .1   | .2    | .3  | 1.8 | 16.8 | 80.7 | 19935          |
| 06009         | .2   | .2    | .2  | 1.8 | 19.2 | 78.3 | 24358          |
| 12015         | .1   | .2    | .2  | 1.5 | 14.0 | 84.0 | 21294          |
| 18021         | .1   | .3    | .3  | 1.5 | 16.9 | 81.0 | 24503          |
| TOT<br>PCT    | .1   | .2    | .3  | 1.6 | 16.8 | 80.9 | 90090<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS   |
|---------------|---------------|------------|-------------|-----------------|--------------------|----------------|
| 00003         | .3            | 1.1        | 7.1         | 27.5            | 65.4               | 12316          |
| 06009         | .3            | 1.4        | 8.4         | 37.2            | 54.3               | 13008          |
| 12015         | .1            | .9         | 6.5         | 30.8            | 62.7               | 14491          |
| 18021         | .2            | .9         | 6.5         | 28.5            | 64.9               | 13787          |
| TOT<br>PCT    | .2            | 1.1        | 7.1         | 31.1            | 61.8               | 53602<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS   | PCT<br>FREQ |
|--------------|------|-------|-------|-------|-------|-------|-------|--------|----------------|-------------|
| 85/89        | *    | .0    | *     | .0    | *     | *     | .0    | .0     | *              | *           |
| 80/84        | .0   | .0    | *     | *     | .1    | .1    | *     | *      | .3             | *           |
| 75/79        | .0   | .0    | *     | .2    | .7    | 1.7   | .9    | .2     | 3.8            | *           |
| 70/74        | *    | *     | *     | .4    | 3.2   | 9.2   | 10.0  | 4.1    | 27.0           | *           |
| 65/69        | *    | *     | *     | .8    | 4.6   | 10.9  | 11.2  | 4.8    | 32.2           | *           |
| 60/64        | .0   | *     | .1    | 1.6   | 7.1   | 10.7  | 8.8   | 3.7    | 32.1           | *           |
| 55/59        | .0   | .0    | *     | .3    | 1.1   | 1.4   | 1.0   | .5     | 4.4            | *           |
| 50/54        | .0   | .0    | .0    | *     | *     | *     | .1    | *      | .2             | *           |
| 45/49        | .0   | .0    | .0    | .0    | .0    | *     | *     | *      | *              | *           |
| 40/44        | .0   | .0    | .0    | .0    | .0    | .0    | *     | .0     | *              | *           |
| TOTAL<br>PCT | *    | *     | .2    | 3.3   | 16.8  | 34.1  | 32.0  | 13.5   | 51720<br>100.0 |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 85/89 | *    | *    | .0  | .0  | .0  | .0  | *   | .0  | .0  | .0   |
| 80/84 | .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    |
| 75/79 | 1.6  | 1.2  | .1  | .1  | .1  | .2  | .2  | .3  | .0  | .1   |
| 70/74 | 11.0 | 8.6  | .8  | .4  | .9  | 1.2 | 1.4 | 2.3 | .0  | .5   |
| 65/69 | 11.0 | 8.6  | 1.5 | 1.2 | 1.6 | 2.5 | 2.4 | 3.0 | .0  | .6   |
| 60/64 | 9.4  | 9.5  | 1.9 | .9  | 1.3 | 2.2 | 2.8 | 3.4 | .0  | .5   |
| 55/59 | 1.5  | 1.1  | .3  | .1  | .1  | .2  | .3  | .7  | .0  | .1   |
| 50/54 | .1   | *    | *   | *   | *   | *   | *   | *   | .0  | *    |
| 45/49 | .0   | *    | .0  | *   | .0  | *   | *   | *   | .0  | .0   |
| 40/44 | .0   | .0   | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| TOTAL | 34.7 | 29.1 | 4.6 | 2.7 | 4.0 | 6.3 | 7.2 | 9.7 | .0  | 1.8  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 71  | 69  | 66  | 62 | 59 | 43  | 65.5 | 24849        |
| 06009         | 85  | 72  | 70  | 66  | 62 | 59 | 43  | 65.4 | 34101        |
| 12015         | 87  | 77  | 74  | 68  | 64 | 61 | 46  | 68.3 | 25674        |
| 18021         | 86  | 76  | 73  | 67  | 63 | 60 | 46  | 67.2 | 33551        |
| TOT           | 87  | 75  | 72  | 67  | 62 | 60 | 43  | 66.6 | 118235       |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.4   | 12.8  | 31.0  | 36.2  | 17.6   | 80   | 12684        |
| 06009         | .0   | 2.4   | 13.1  | 31.7  | 35.5  | 17.2   | 80   | 13331        |
| 12015         | *    | 5.6   | 23.1  | 37.0  | 25.7  | 8.6    | 75   | 13568        |
| 18021         | *    | 3.4   | 17.9  | 36.5  | 31.1  | 11.1   | 77   | 13478        |
| TOT           | 3    | 1887  | 8981  | 18078 | 16941 | 7171   | 78   | 53061        |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 17

| PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)<br>VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F) |          |          |          |          |          |          |          |          |          |          |          |       |          |           |  |  |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|--|--|
| AIR-SEA<br>TMP DIF   | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |  |  |
| 20/22  | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | *        | 3     | .0       | *         |  |  |
| 17/19  | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | *        | .0       | 6     | .0       | *         |  |  |
| 14/16  | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *        | .0       | 32    | .0       | .1        |  |  |
| 11/13  | .0       | .0       | .0       | .0       | *        | *        | *        | .1       | .1       | *        | *        | 158   | *        | .3        |  |  |
| 9/10   | .0       | .0       | .0       | .0       | *        | *        | .1       | .1       | .1       | .1       | *        | 274   | *        | .5        |  |  |
| 7/8  | .0       | .0       | .0       | *        | .1       | .1       | .3       | .3       | .3       | .1       | .0       | 618   | *        | 1.1       |  |  |
| 6  | .0       | .0       | .0       | *        | *        | .1       | .3       | .2       | .2       | *        | *        | 462   | *        | .8        |  |  |
| 5  | .0       | .0       | *        | *        | .1       | .4       | .6       | .7       | .3       | *        | .0       | 1197  | *        | 2.0       |  |  |
| 4  | .0       | .0       | .0       | *        | .2       | .8       | .9       | .8       | .3       | *        | .0       | 1729  | .1       | 2.9       |  |  |
| 3  | .0       | .0       | *        | *        | .3       | 1.1      | 1.1      | 1.1      | .2       | *        | .0       | 2178  | .1       | 3.7       |  |  |
| 2  | .0       | .0       | *        | *        | .9       | 2.3      | 2.1      | 1.7      | .1       | *        | .0       | 4185  | .1       | 7.1       |  |  |
| 1  | .0       | .0       | *        | .1       | 1.9      | 3.6      | 3.4      | 1.9      | *        | .0       | .0       | 6333  | .2       | 10.8      |  |  |
| 0  | .0       | .0       | *        | .3       | 4.5      | 5.1      | 5.6      | 1.7      | .1       | *        | .0       | 9945  | .3       | 17.0      |  |  |
| -1   | .0       | .0       | *        | .7       | 6.0      | 4.9      | 5.3      | .8       | *        | *        | .0       | 10156 | .2       | 17.4      |  |  |
| -2   | .0       | *        | *        | 1.3      | 5.5      | 3.3      | 3.0      | .4       | *        | *        | .0       | 7904  | .1       | 13.4      |  |  |
| -3   | .0       | .0       | *        | 1.7      | 3.5      | 1.9      | 1.5      | .1       | *        | .0       | .0       | 5078  | .1       | 8.6       |  |  |
| -4   | .0       | *        | .1       | 1.3      | 2.3      | 1.1      | .7       | .1       | *        | .0       | .0       | 3273  | *        | 5.5       |  |  |
| -5   | .0       | *        | .1       | 1.1      | 1.5      | .6       | .3       | *        | .0       | .0       | .0       | 2126  | *        | 3.6       |  |  |
| -6   | .0       | .0       | .1       | .5       | .5       | .3       | .1       | *        | .0       | .0       | .0       | 907   | *        | 1.5       |  |  |
| -7/-8  | *        | *        | .2       | .5       | .5       | .2       | .1       | *        | .0       | .0       | .0       | 907   | *        | 1.5       |  |  |
| -9/-10   | .0       | *        | .1       | .2       | .1       | .1       | *        | .0       | .0       | .0       | .0       | 294   | *        | .5        |  |  |
| -11/-13  | *        | *        | .1       | .1       | .1       | *        | *        | .0       | .0       | .0       | .0       | 156   | *        | .3        |  |  |
| -14/-16  | *        | *        | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 46    | *        | .1        |  |  |
| -17/-19  | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 10    | .0       | *         |  |  |
| -20/-22  | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | *         |  |  |
| TOTAL  |          |          |          |          |          |          |          |          |          |          |          | 57981 |          |           |  |  |
| PCT  | *        | .1       | .7       | 7.7      | 28.0     | 26.0     | 25.4     | 10.1     | 1.6      | .2       | *        | 100.0 | 1.3      | 98.7      |  |  |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| NE      |     |      |       |       |       |     |      |     |      |       |       |       |     |      |  |  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|--|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |  |
| <1      | .5  | 1.6  | .1    | .0    | .0    | .0  | 2.2  | .3  | 1.1  | .1    | .0    | .0    | .0  | .0   |  |  |
| 1-2     | .3  | 6.7  | 3.0   | .0    | .0    | .0  | 10.1 | .2  | 5.0  | 2.5   | .0    | .0    | .0  | .0   |  |  |
| 3-4     | *   | 3.3  | 7.0   | .4    | .0    | .0  | 10.7 | *   | 2.5  | 5.8   | .4    | .0    | .0  | .0   |  |  |
| 5-6     | *   | .7   | 5.4   | .8    | *     | .0  | 7.0  | .0  | .5   | 4.7   | .8    | *     | .0  | .0   |  |  |
| 7       | .0  | .1   | 2.2   | .9    | *     | .0  | 3.2  | .0  | .1   | 1.8   | .8    | *     | .0  | .0   |  |  |
| 8-9     | .0  | *    | .6    | .5    | *     | .0  | 1.2  | *   | *    | .6    | .6    | *     | .0  | .0   |  |  |
| 10-11   | .0  | *    | .2    | .3    | *     | .0  | .5   | .0  | *    | .2    | .3    | *     | *   | .5   |  |  |
| 12      | .0  | *    | *     | .2    | *     | .0  | .2   | .0  | *    | *     | .1    | *     | *   | .2   |  |  |
| 13-16   | .0  | *    | *     | .2    | *     | .0  | .2   | *   | *    | *     | .2    | *     | *   | .2   |  |  |
| 17-19   | .0  | *    | *     | *     | *     | .0  | *    | .0  | .0   | *     | *     | *     | *   | .0   |  |  |
| 20-22   | .0  | .0   | *     | *     | *     | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 23-25   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |
| TOT PCT | .8  | 12.6 | 18.6  | 3.3   | .2    | .0  | 35.4 | .6  | 9.2  | 15.9  | 3.3   | .2    | *   | 29.1 |  |  |

| SE      |     |      |       |       |       |     |     |     |      |       |       |       |     |     |  |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |  |
| <1      | .2  | .4   | *     | .0    | .0    | .0  | .6  | .1  | .3   | *     | .0    | .0    | .0  | .0  |  |  |
| 1-2     | .1  | 1.4  | .4    | .0    | .0    | .0  | 1.9 | .1  | .7   | .2    | .0    | .0    | .0  | .0  |  |  |
| 3-4     | *   | .5   | .6    | *     | .0    | .0  | 1.1 | *   | .2   | .3    | *     | .0    | .0  | .5  |  |  |
| 5-6     | .0  | .1   | .3    | *     | *     | .0  | .5  | *   | .1   | .3    | .1    | .0    | .0  | .4  |  |  |
| 7       | .0  | *    | .1    | *     | .0    | .0  | .1  | .0  | *    | .1    | *     | .0    | .0  | .2  |  |  |
| 8-9     | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | *    | *     | *     | *     | .0  | *   |  |  |
| 10-11   | .0  | *    | *     | *     | .0    | .0  | *   | .0  | *    | *     | *     | *     | .0  | *   |  |  |
| 12      | .0  | *    | *     | *     | *     | .0  | *   | .0  | .0   | *     | *     | *     | .0  | *   |  |  |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | *     | *     | *     | .0  | *   |  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | *     | .0  | *   |  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |
| TOT PCT | .3  | 2.4  | 1.5   | .1    | *     | .0  | 4.3 | .1  | 1.2  | .9    | .2    | *     | .0  | 2.5 |  |  |

PERIOD: (OVER-ALL) 1963-1973

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AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .4   | .3    | .0    | .0    | .0  | .6  | .2  | .4   | .3    | .0    | .0    | .0  | .6  |
| 1-2     | .1  | 1.0  | .3    | .0    | .0    | .0  | 1.3 | .1  | 1.4  | .5    | .0    | .0    | .0  | 2.0 |
| 3-4     | .3  | .6   | .3    | .0    | .0    | .0  | 1.0 | .3  | .9   | .1    | .0    | .0    | .0  | 1.6 |
| 5-6     | .0  | .1   | .4    | .1    | .0    | .0  | .6  | .0  | .1   | .7    | .1    | .0    | .0  | 1.0 |
| 7       | .0  | .2   | .1    | .0    | .0    | .0  | .3  | .0  | .3   | .2    | .0    | .0    | .0  | .5  |
| 8-9     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 1.8  | 1.6   | .3    | .0    | .0  | 4.1 | .3  | 2.5  | 2.5   | .6    | .0    | .0  | 6.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .3  | .6   | .3    | .0    | .0    | .0  | .9  | .3  | .8   | .3    | .0    | .0    | .0  | 1.1 |           |
| 1-2     | .1  | 1.8  | .5    | .0    | .0    | .0  | 2.5 | .2  | 2.9  | .6    | .0    | .0    | .0  | 3.7 |           |
| 3-4     | .3  | .7   | .8    | .1    | .0    | .0  | 1.6 | .3  | 1.0  | 1.2   | .1    | .0    | .0  | 2.3 |           |
| 5-6     | .0  | .1   | .7    | .1    | .0    | .0  | .9  | .0  | .2   | .8    | .2    | .0    | .0  | 1.1 |           |
| 7       | .0  | .2   | .3    | .2    | .0    | .0  | .5  | .0  | .3   | .2    | .0    | .0    | .0  | .5  |           |
| 8-9     | .0  | .1   | .1    | .1    | .0    | .0  | .2  | .0  | .1   | .1    | .0    | .0    | .0  | .3  |           |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .1  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .4  | 3.3  | 2.4   | .6    | .1    | .0  | 6.8 | .5  | 4.9  | 3.1   | .7    | .1    | .0  | 9.2 | 97.4      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+     | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|---------|-------|---------|
| <1      | 5.3 | 5.7  | .4    | .0    | .0    | .0      | 11.3  |         |
| 1-2     | 1.3 | 20.6 | 7.9   | .0    | .0    | .0      | 29.8  |         |
| 3-4     | .2  | 9.0  | 17.1  | 1.1   | .0    | .0      | 27.3  |         |
| 5-6     | .3  | 1.9  | 13.2  | 2.2   | .1    | .0      | 17.4  |         |
| 7       | .3  | 5.2  | 2.3   | .1    | .0    | .0      | 7.9   |         |
| 8-9     | .1  | 1.6  | 1.5   | .1    | .0    | .0      | 3.4   |         |
| 10-11   | .0  | .5   | .9    | .1    | .0    | .0      | 1.5   |         |
| 12      | .0  | .1   | .4    | .1    | .0    | .0      | .6    |         |
| 13-16   | .0  | .1   | .4    | .1    | .0    | .0      | .6    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0      | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| TOT PCT | 6.8 | 37.7 | 46.0  | 8.9   | .6    | * 100.0 | 33435 |         |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.5 | 7.6  | 9.8  | 5.7  | 2.5  | 1.0 | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12116 | 4        |
| 6-7          | .3  | 1.2  | 5.0  | 7.4  | 5.2  | 2.5 | 1.4   | .5  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10025 | 6        |
| 8-9          | .0  | .4   | 1.9  | 3.6  | 3.7  | 2.3 | 1.5   | .7  | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6238  | 7        |
| 10-11        | .0  | .5   | .8   | 1.2  | 1.5  | 1.2 | .9    | .4  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3100  | 7        |
| 12-13        | .0  | .0   | .8   | .7   | .7   | .5  | .5    | .2  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1622  | 7        |
| >13          | .0  | .0   | .0   | .3   | .3   | .2  | .2    | .1  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 667   | 9        |
| INDET        | 2.5 | 3.6  | 4.5  | 3.4  | 2.8  | 1.6 | .9    | .3  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 8560  | 5        |
| TOTAL        | 4.1 | 13.4 | 22.8 | 22.4 | 16.7 | 9.3 | 5.8   | 2.4 | 2.3   | .5    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 42328 | 5        |
| PCT          | 4.1 | 13.4 | 22.8 | 22.4 | 16.7 | 9.3 | 5.8   | 2.4 | 2.3   | .5    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

AREA 0003 CASABLANCA SW  
31.7N 13.1W

TABLE 20

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

| SEA TMP<br>DEG F | JAN  | FEB  | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC   | ANN    | PCT   |
|------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|--------|-------|
| 96+              | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 95/96            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 93/94            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 91/92            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 89/90            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 87/88            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 85/86            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 83/84            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 1      | .0    |
| 81/82            | .0   | .0   | .0    | .0   | .0   | .0   | .1   | .1   | .1   | .0   | .0   | .0    | 28     | .0    |
| 79/80            | .0   | .0   | .0    | .0   | .0   | .0   | .2   | .3   | .3   | .2   | .0   | .0    | 93     | .1    |
| 77/78            | .0   | .0   | .0    | .0   | .0   | .1   | .4   | .7   | 1.1  | .7   | .2   | .0    | 285    | .3    |
| 75/76            | .0   | .0   | .0    | .0   | .1   | .3   | 1.0  | 3.6  | 7.3  | 3.9  | .6   | .1    | 1508   | 1.2   |
| 73/74            | .1   | .0   | .0    | .1   | .2   | 1.1  | 5.8  | 21.0 | 35.6 | 22.5 | 3.4  | .2    | 8010   | 7.2   |
| 71/72            | .3   | .2   | .2    | .3   | .8   | 4.9  | 21.1 | 45.4 | 40.1 | 40.7 | 14.7 | 1.3   | 15312  | 13.7  |
| 69/70            | .9   | .6   | .9    | .7   | 2.8  | 17.9 | 39.7 | 22.7 | 11.2 | 22.7 | 30.9 | 5.3   | 14335  | 12.8  |
| 67/68            | 5.1  | 3.0  | 3.9   | 5.0  | 14.8 | 39.9 | 25.9 | 4.4  | 3.0  | 6.5  | 31.2 | 23.0  | 15667  | 13.8  |
| 65/66            | 22.4 | 13.7 | 13.5  | 17.4 | 36.5 | 25.9 | 4.6  | 1.1  | .9   | 1.6  | 13.4 | 37.2  | 17926  | 16.0  |
| 63/64            | 47.7 | 41.6 | 42.1  | 45.6 | 36.4 | 8.6  | 1.0  | .6   | .4   | 1.0  | 4.3  | 25.9  | 24417  | 21.8  |
| 61/62            | 18.6 | 30.7 | 29.9  | 24.0 | 6.9  | .8   | .1   | .1   | .2   | .8   | 5.1  | 11204 | 10.0   | .0    |
| 59/60            | 3.8  | 7.9  | 7.6   | 5.9  | 1.3  | .2   | .1   | .0   | .0   | .1   | .3   | 1.5   | 2731   | 2.4   |
| 57/58            | .7   | 1.3  | 1.1   | .7   | .1   | .1   | .1   | .0   | .0   | .0   | .1   | .4    | 440    | .4    |
| 55/56            | .3   | .6   | .5    | .2   | .1   | .1   | .0   | .0   | .0   | .0   | .0   | .1    | 183    | .2    |
| 53/54            | .1   | .3   | .2    | .1   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .1    | 71     | .1    |
| 51/52            | .0   | .1   | .1    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 19     | .0    |
| 49/50            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 5      | .0    |
| 47/48            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 45/46            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 43/44            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 41/42            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 39/40            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 37/38            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 35/36            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 33/34            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 31/32            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 29/30            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 27/28            | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 27               | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| 27               | .0   | .0   | .0    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 0      | .0    |
| TOTAL            | 9709 | 9011 | 10045 | 9371 | 9827 | 9039 | 9348 | 9011 | 8579 | 9145 | 9236 | 9714  | 112035 | 100.0 |
| MEAN             | 63.6 | 62.8 | 62.9  | 63.3 | 64.9 | 67.2 | 69.5 | 71.3 | 72.1 | 71.2 | 68.4 | 65.4  | 66.8   |       |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000  | 0300 | 0600  | 0900 | 1200  | 1500 | 1800  | 2100 | MEAN | TOTAL<br>OBS |
|-----|-------|------|-------|------|-------|------|-------|------|------|--------------|
| JAN | 1021  | 1020 | 1020  | 1023 | 1022  | 1020 | 1021  | 1022 | 1021 | 6956         |
| FEB | 1018  | 1017 | 1017  | 1020 | 1019  | 1016 | 1018  | 1020 | 1018 | 6571         |
| MAR | 1018  | 1017 | 1017  | 1018 | 1019  | 1017 | 1017  | 1018 | 1018 | 7532         |
| APR | 1019  | 1018 | 1017  | 1018 | 1019  | 1018 | 1018  | 1018 | 1018 | 6826         |
| MAY | 1019  | 1018 | 1017  | 1019 | 1019  | 1018 | 1018  | 1019 | 1018 | 7072         |
| JUN | 1019  | 1018 | 1018  | 1019 | 1019  | 1019 | 1018  | 1019 | 1019 | 6579         |
| JUL | 1019  | 1018 | 1018  | 1019 | 1019  | 1018 | 1018  | 1019 | 1019 | 6696         |
| AUG | 1018  | 1017 | 1017  | 1017 | 1018  | 1017 | 1017  | 1018 | 1017 | 6675         |
| SEP | 1019  | 1018 | 1018  | 1018 | 1019  | 1018 | 1018  | 1019 | 1018 | 6098         |
| OCT | 1018  | 1017 | 1017  | 1018 | 1018  | 1017 | 1017  | 1018 | 1018 | 6732         |
| NOV | 1018  | 1017 | 1017  | 1018 | 1019  | 1017 | 1018  | 1018 | 1018 | 6678         |
| DEC | 1021  | 1021 | 1020  | 1022 | 1022  | 1020 | 1020  | 1022 | 1021 | 7162         |
| ANN | 1019  | 1018 | 1018  | 1019 | 1019  | 1018 | 1018  | 1019 | 1019 | 81577        |
| OBS | 16943 | 1531 | 16935 | 4625 | 18176 | 1646 | 17331 | 4390 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 994  | 1001 | 1009 | 1018 | 1022 | 1026 | 1030 | 1033 | 1037 |
| FEB | 992  | 1001 | 1007 | 1014 | 1019 | 1023 | 1028 | 1031 | 1038 |
| MAR | 993  | 1002 | 1007 | 1014 | 1018 | 1022 | 1026 | 1029 | 1036 |
| APR | 996  | 1003 | 1009 | 1015 | 1018 | 1021 | 1025 | 1029 | 1037 |
| MAY | 1000 | 1008 | 1011 | 1016 | 1018 | 1021 | 1024 | 1027 | 1032 |
| JUN | 1004 | 1009 | 1012 | 1017 | 1019 | 1021 | 1024 | 1025 | 1030 |
| JUL | 1006 | 1011 | 1014 | 1017 | 1019 | 1020 | 1023 | 1025 | 1028 |
| AUG | 1003 | 1009 | 1012 | 1016 | 1018 | 1019 | 1022 | 1024 | 1029 |
| SEP | 1002 | 1010 | 1013 | 1017 | 1019 | 1020 | 1023 | 1025 | 1032 |
| OCT | 995  | 1006 | 1010 | 1015 | 1018 | 1020 | 1023 | 1026 | 1031 |
| NOV | 993  | 1001 | 1008 | 1015 | 1019 | 1022 | 1026 | 1030 | 1037 |
| DEC | 991  | 1001 | 1009 | 1018 | 1022 | 1025 | 1029 | 1032 | 1038 |



PERIOD: (PRIMARY) 1916-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .6                 | 3.4       | .4   | .0        | .0   | .0              | .0   | 4.4                     | 2.6            | .7        | 1.4         | .2                  | .1         | .0              | 90.7       |
| NE       | .3                 | .7        | .3   | .0        | .0   | .0              | .0   | 1.3                     | .4             | .4        | 1.4         | .0                  | .2         | .2              | 96.3       |
| E        | .7                 | .1        | .0   | .0        | .0   | .0              | .0   | .8                      | .0             | .3        | 2.9         | .0                  | 2.3        | .6              | 93.3       |
| SE       | .2                 | .6        | .3   | .0        | .0   | .0              | .3   | 1.4                     | .1             | .2        | 4.5         | .0                  | 4.9        | 4.3             | 84.8       |
| S        | 1.3                | 2.7       | .9   | .0        | .0   | .0              | .0   | 4.7                     | 1.2            | 1.6       | 2.8         | .0                  | 1.2        | .6              | 88.0       |
| SW       | .6                 | 2.9       | .9   | .0        | .0   | .0              | .0   | 4.3                     | 1.7            | 1.3       | 1.7         | .0                  | .3         | .0              | 91.1       |
| W        | .7                 | 2.9       | 1.4  | .0        | .0   | .0              | .0   | 5.0                     | 1.6            | .5        | .4          | .0                  | 1.3        | .5              | 90.7       |
| NW       | 1.5                | 3.1       | 1.7  | .0        | .0   | .0              | .0   | 6.3                     | 2.6            | .9        | 1.0         | .0                  | .7         | .2              | 88.4       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 2.1         | .0                  | .7         | .7              | 96.6       |
| TOT PCT  | .6                 | 1.5       | .5   | .0        | .0   | .0              | *    | 2.5                     | .9             | .6        | 2.0         | *                   | 1.0        | .6              | 92.4       |
| TOT OBS: | 3621               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .7                 | .8        | .4   | .0        | .0   | .0              | .0   | 1.9                     | .8             | 1.2       | 1.4         | .0                  | .6         | .6              | 93.8       |
| 06009      | .7                 | 2.4       | .8   | .0        | .0   | .0              | .0   | 3.8                     | 1.1            | .8        | 1.9         | .0                  | .6         | .3              | 91.5       |
| 12015      | .4                 | .8        | .3   | .0        | .0   | .0              | .0   | 1.6                     | .7             | .0        | 1.1         | .0                  | 1.1        | .8              | 94.6       |
| 18021      | .3                 | 1.8       | .2   | .0        | .0   | .0              | .1   | 2.4                     | .7             | .2        | 3.2         | .1                  | 1.7        | .8              | 90.8       |
| TOT PCT    | .5                 | 1.5       | .4   | .0        | .0   | .0              | *    | 2.4                     | .8             | .6        | 1.9         | *                   | 1.0        | .6              | 92.7       |
| TOT OBS:   | 3783               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL QBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | .9                 | 6.3  | 5.8   | 1.1   | .1    | .0  |      | 14.2      | 11.9     | 14.0     | 9.5        | 14.0  | 13.4  | 12.6  | 14.7  | 16.3  | 15.2  |    |
| NE       | 1.4                | 14.9 | 18.1  | 2.9   | .2    | .0  |      | 37.4      | 12.5     | 39.0     | 39.3       | 39.9  | 38.7  | 34.4  | 25.5  | 35.7  | 38.0  |    |
| E        | 1.1                | 9.4  | 5.8   | .6    | *     | .0  |      | 16.9      | 10.1     | 17.4     | 23.8       | 15.2  | 19.9  | 17.6  | 16.4  | 15.3  | 17.6  |    |
| SE       | .5                 | 4.6  | 2.8   | .4    | *     | .0  |      | 8.4       | 10.6     | 6.1      | 7.3        | 7.7   | 9.6   | 9.8   | 15.9  | 9.7   | 7.4   |    |
| S        | .6                 | 3.0  | 1.9   | .4    | *     | .0  |      | 5.9       | 10.5     | 5.5      | 8.5        | 5.7   | 4.3   | 7.6   | 9.3   | 6.0   | 4.1   |    |
| SW       | .4                 | 2.9  | 1.8   | .3    | *     | .0  |      | 5.4       | 10.8     | 5.6      | 2.7        | 4.9   | 4.9   | 5.9   | 8.6   | 5.7   | 5.1   |    |
| W        | .5                 | 2.0  | 1.1   | .2    | *     | .0  |      | 3.7       | 9.6      | 3.3      | 2.1        | 3.7   | 2.1   | 4.5   | 4.7   | 4.3   | 3.5   |    |
| NW       | .4                 | 2.6  | 1.4   | .3    | *     | .0  |      | 4.7       | 10.2     | 4.4      | 4.3        | 5.0   | 5.0   | 4.6   | 2.9   | 4.3   | 5.5   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 3.4                |      |       |       |       |     |      | 3.4       | .0       | 4.7      | 2.4        | 3.7   | 2.2   | 2.9   | 2.0   | 2.6   | 3.6   |    |
| TOT OBS  | 696                | 3464 | 2930  | 471   | 34    | 0   | 7595 |           | 11.0     | 1573     | 82         | 1480  | 670   | 1429  | 102   | 1421  | 838   |    |
| TOT PCT  | 9.2                | 45.6 | 38.6  | 6.2   | .4    | .0  |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL QBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 3.3                | 7.6  | 3.0   | .4    | *   |           | 14.2     | 11.9     | 13.8       | 13.8  | 12.8  | 15.9  |    |
| NE       | 6.1                | 21.9 | 8.3   | 1.0   | *   |           | 37.4     | 12.5     | 39.0       | 39.5  | 33.8  | 36.6  |    |
| E        | 4.6                | 10.0 | 2.3   | .1    | .0  |           | 16.9     | 10.1     | 17.7       | 16.7  | 17.5  | 16.1  |    |
| SE       | 2.4                | 4.5  | 1.4   | .1    | .0  |           | 8.4      | 10.6     | 6.1        | 8.3   | 10.2  | 8.8   |    |
| S        | 2.0                | 2.8  | .9    | .2    | .0  |           | 5.9      | 10.5     | 5.6        | 5.3   | 7.8   | 5.3   |    |
| SW       | 1.7                | 2.7  | .9    | .1    | .0  |           | 5.4      | 10.8     | 5.5        | 4.9   | 6.0   | 5.5   |    |
| W        | 1.4                | 1.8  | .5    | .1    | *   |           | 3.7      | 9.6      | 3.2        | 3.2   | 4.6   | 4.0   |    |
| NW       | 1.6                | 2.3  | .7    | .1    | *   |           | 4.7      | 10.2     | 4.4        | 5.0   | 4.5   | 4.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.4                |      |       |       |     |           | 3.4      | .0       | 4.6        | 3.3   | 2.9   | 3.0   |    |
| TOT OBS  | 2005               | 4075 | 1364  | 146   | 5   | 7595      |          | 11.0     | 1655       | 2150  | 1531  | 2259  |    |
| TOT PCT  | 26.4               | 53.7 | 18.0  | 1.9   | .1  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1916-1973  
(OVER-ALL) 1855-1973

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28.0N 15.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 0000 | 4.6  | 6.0 | 44.8 | 38.6               | 5.6   | .4    | .0  | 10.9  | 100.0    | 1655      |
| 0600 | 3.3  | 5.5 | 46.2 | 38.4               | 6.2   | .4    | .0  | 10.9  | 100.0    | 2150      |
| 1200 | 2.9  | 5.2 | 43.3 | 40.9               | 7.4   | .4    | .0  | 11.5  | 100.0    | 1531      |
| 1800 | 3.0  | 6.3 | 47.2 | 37.1               | 5.8   | .6    | .0  | 10.8  | 100.0    | 2259      |
| TOT  | 257  | 439 | 3464 | 2930               | 471   | 34    | 0   | 11.0  |          | 7595      |
| PCT  | 3.4  | 5.8 | 45.6 | 38.6               | 6.2   | .4    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 5.3  | 3.2  | 4.2  | 1.7          |              | 3.8                    |
| NE       | 13.2 | 8.4  | 10.6 | 3.6          |              | 3.7                    |
| E        | 7.0  | 2.0  | 2.6  | 1.2          |              | 2.7                    |
| SE       | 4.6  | 1.6  | 2.3  | .9           |              | 3.1                    |
| S        | 3.3  | 1.3  | 3.0  | .8           |              | 3.8                    |
| SW       | 3.1  | 1.7  | 2.3  | .4           |              | 3.5                    |
| W        | 1.5  | .9   | 1.0  | .4           |              | 3.5                    |
| NW       | 1.3  | .8   | 1.3  | .4           |              | 4.0                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 3.0  | .6   | .6   | .2           |              | 2.0                    |
| TOT OBS  | 1188 | 575  | 783  | 266          | 2812         | 3.4                    |
| TOT PCT  | 42.2 | 20.4 | 27.8 | 9.5          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| *          | .0         | .1         | .3         | 1.8          | 1.6          | .8           | .2           | .0           | .1    | 9.5                |              |
| *          | *          | .1         | .9         | 4.5          | 3.5          | 1.5          | .6           | .1           | .2    | 24.2               |              |
| .1         | .0         | .0         | .2         | .4           | .9           | .4           | .2           | .1           | .2    | 10.4               |              |
| *          | .0         | .0         | *          | .5           | .4           | .1           | .1           | .2           | .3    | 7.7                |              |
| .0         | .0         | .1         | .4         | .8           | .6           | .4           | .1           | *            | .2    | 5.8                |              |
| *          | *          | .1         | .3         | .6           | .4           | .1           | *            | .1           | .1    | 5.8                |              |
| .0         | .0         | *          | .1         | .4           | .2           | .1           | *            | .0           | *     | 3.0                |              |
| .0         | .0         | *          | .1         | .4           | .4           | .2           | .1           | *            | *     | 2.5                |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| .0         | .0         | .0         | .1         | *            | .2           | *            | *            | .0           | .1    | 3.9                |              |
| 6          | 2          | 10         | 65         | 263          | 230          | 102          | 40           | 16           | 33    | 2045               | 2812         |
| .2         | .1         | .4         | 2.3        | 9.4          | 8.2          | 3.6          | 1.4          | .6           | 1.2   | 72.7               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.3         | 1.7        | 1.8        | 1.8        | 1.8          | 1.8          | 1.8           | 1.8        |
| = OR >5000        | 2.6         | 3.1        | 3.2        | 3.2        | 3.2          | 3.2          | 3.2           | 3.2        |
| = OR >3500        | 5.3         | 6.3        | 6.6        | 6.6        | 6.6          | 6.7          | 6.7           | 6.7        |
| = OR >2000        | 12.1        | 14.1       | 14.6       | 14.6       | 14.6         | 14.7         | 14.7          | 14.7       |
| = OR >1000        | 20.1        | 23.1       | 23.7       | 23.8       | 23.8         | 23.8         | 23.8          | 23.8       |
| = OR >600         | 21.9        | 25.1       | 25.9       | 26.0       | 26.1         | 26.1         | 26.1          | 26.1       |
| = OR >300         | 22.1        | 25.4       | 26.2       | 26.4       | 26.4         | 26.4         | 26.4          | 26.4       |
| = OR >150         | 22.1        | 25.5       | 26.3       | 26.4       | 26.5         | 26.5         | 26.5          | 26.5       |
| = OR >0           | 22.2        | 25.6       | 26.5       | 26.7       | 26.7         | 26.7         | 26.7          | 26.7       |
| TOTAL             | 643         | 741        | 769        | 773        | 774          | 775          | 775           | 775        |

TOTAL NUMBER OF OBS: 2900

PCT FREQ NH <5/8: 73.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|-----|-----|---------|--------------|
|  | 27.3 | 11.5 | 13.7 | 11.2 | 9.0 | 6.2 | 7.2 | 6.6 | 7.2     | .2           |
|  |      |      |      |      |     |     |     |     |         | 3098         |

PERIOD: (PRIMARY) 1916-1973  
(OVER-ALL) 1855-1973

JANUARY

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28.0N 15.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                    |
|--------------|--------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|---|
| <1/2         | PCP    | .0   | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
|              | NO PCP | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | TOT %  | .0   | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | *   | *   | *   | .0  | .0  | .0   | .1   |   |
|              | NO PCP | .1   | .1   | .1   | .0  | .2  | .1  | *   | *   | .0  | .0   | .6   |   |
|              | TOT %  | .1   | .1   | .1   | .0  | .2  | .1  | *   | *   | .0  | .0   | .7   |   |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .1  | .1  | .0  | .0  | .0  | .0   | .1   |   |
|              | NO PCP | .0   | *    | .1   | *   | .0  | .0  | *   | *   | .0  | .0   | .2   |   |
|              | TOT %  | .0   | *    | .1   | *   | .1  | .1  | *   | *   | .0  | .0   | .3   |   |
| 2<5          | PCP    | *    | .0   | .0   | .0  | .1  | *   | *   | .0  | .0  | .0   | .2   |   |
|              | NO PCP | .2   | .3   | .3   | .6  | .2  | .1  | *   | *   | .0  | .1   | 1.9  |   |
|              | TOT %  | .2   | .3   | .3   | .6  | .3  | .2  | *   | *   | .0  | .1   | 2.0  |   |
| 5<10         | PCP    | .4   | .3   | .1   | .1  | .1  | .1  | .1  | .1  | .0  | .0   | 1.3  |   |
|              | NO PCP | 2.2  | 5.1  | 2.7  | 2.2 | 1.4 | 1.0 | .7  | .6  | .0  | .4   | 16.3 |   |
|              | TOT %  | 2.5  | 5.4  | 2.8  | 2.2 | 1.5 | 1.1 | .8  | .8  | .0  | .4   | 17.6 |   |
| 10+          | PCP    | .2   | .2   | .0   | .1  | .1  | .1  | *   | .1  | .0  | .0   | .8   |   |
|              | NO PCP | 11.0 | 29.9 | 10.0 | 6.2 | 6.1 | 5.8 | 2.9 | 3.1 | .0  | 3.5  | 78.5 |   |
|              | TOT %  | 11.2 | 30.1 | 10.0 | 6.3 | 6.2 | 5.8 | 2.9 | 3.2 | .0  | 3.5  | 79.3 |   |
| TOT OBS      |        |      |      |      |     |     |     |     |     |     |      |      | 3613  |
| TOT PCT      |        |      |      |      |     |     |     |     |     |     |      |      | 14.0 35.9 13.3 9.2 8.4 7.3 3.9 4.0 .0 4.0 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                    |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|---|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | 4-10       | .0   | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
|              | 11-21      | .0   | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | TOT %      | .0   | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | *   | .0  | .0  | .0  | .0  | .0   | *    |   |
|              | 4-10       | *    | *    | *    | .0  | .1  | *   | *   | *   | .0  | .0   | .2   |   |
|              | 11-21      | *    | *    | *    | .0  | .1  | *   | *   | *   | .0  | .0   | .2   |   |
|              | 22+        | .0   | *    | .0   | .0  | *   | *   | .0  | .0  | .0  | .0   | *    |   |
|              | TOT %      | .1   | .1   | .1   | .0  | .2  | .1  | *   | *   | .0  | .0   | .5   |   |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | 4-10       | .0   | .0   | *    | *   | *   | .0  | *   | *   | .0  | .0   | .1   |   |
|              | 11-21      | .0   | *    | *    | *   | .1  | .1  | .0  | .0  | .0  | .0   | .2   |   |
|              | 22+        | .0   | *    | *    | .0  | .0  | *   | .0  | .0  | .0  | .0   | *    |   |
|              | TOT %      | .0   | *    | .1   | .1  | .1  | .1  | *   | *   | .0  | .0   | .4   |   |
| 2<5          | 0-3        | .0   | *    | *    | *   | .0  | .0  | *   | .0  | .0  | .1   | .2   |   |
|              | 4-10       | .1   | .1   | .1   | .2  | .1  | .1  | *   | *   | .0  | .0   | .6   |   |
|              | 11-21      | .1   | .1   | .1   | .2  | .1  | .1  | .0  | *   | .0  | .0   | .7   |   |
|              | 22+        | *    | *    | *    | .1  | .1  | *   | .0  | .0  | .0  | .0   | .3   |   |
|              | TOT %      | .2   | .3   | .3   | .5  | .2  | .2  | *   | *   | .0  | .1   | 1.9  |   |
| 5<10         | 0-3        | .1   | .2   | .2   | .1  | .1  | .1  | .1  | .1  | .0  | .4   | 1.3  |   |
|              | 4-10       | .9   | 1.6  | .9   | .7  | .5  | .4  | .3  | .3  | .0  | .0   | 5.6  |   |
|              | 11-21      | .9   | 2.2  | 1.1  | .8  | .4  | .4  | .3  | .3  | .0  | .0   | 6.4  |   |
|              | 22+        | .2   | .5   | .1   | .2  | .1  | .1  | *   | .1  | .0  | .0   | 1.3  |   |
|              | TOT %      | 2.1  | 4.5  | 2.3  | 1.8 | 1.2 | 1.0 | .7  | .7  | .0  | .4   | 14.7 |   |
| 10+          | 0-3        | .7   | 1.2  | .9   | .4  | .4  | .4  | .4  | .2  | .0  | 3.2  | 7.9  |   |
|              | 4-10       | 4.8  | 12.7 | 7.9  | 3.6 | 2.8 | 2.9 | 1.7 | 2.1 | .0  | .0   | 38.6 |   |
|              | 11-21      | 4.6  | 15.9 | 4.0  | 2.0 | 1.8 | 1.8 | .8  | 1.0 | .0  | .0   | 31.9 |   |
|              | 22+        | .8   | 2.0  | .3   | .2  | .4  | .3  | .1  | .1  | .0  | .0   | 4.2  |   |
|              | TOT %      | 10.8 | 31.8 | 13.2 | 6.3 | 5.5 | 5.3 | 3.0 | 3.4 | .0  | 3.2  | 82.5 |   |
| TOT OBS      |            |      |      |      |     |     |     |     |     |     |      |      | 5248  |
| TOT PCT      |            |      |      |      |     |     |     |     |     |     |      |      | 13.2 36.7 15.9 8.6 7.2 6.6 3.8 4.2 .0 3.8 100.0 |



PERIOD: (PRIMARY) 1916-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .1         | .1         | .3         | 2.4        | 6.9          | 7.0          | 2.6          | .8           | .4           | .9    | 21.7  | 78.3               | 738          |
| 06009         | .4         | .1         | .6         | 3.2        | 10.0         | 8.1          | 4.3          | 1.9          | .6           | 1.1   | 30.4  | 69.6               | 718          |
| 12015         | .2         | .0         | .5         | 1.4        | 9.5          | 7.4          | 3.2          | 1.6          | .5           | 1.1   | 25.4  | 74.6               | 835          |
| 18021         | .0         | .0         | .0         | 1.7        | 8.7          | 8.7          | 3.6          | 1.2          | .7           | 1.7   | 26.4  | 73.6               | 747          |
| TOT           | 6          | 2          | 10         | 66         | 267          | 237          | 104          | 42           | 16           | 37    | 787   | 2251               | 3038         |
| PCT           | .2         | .1         | .3         | 2.2        | 8.8          | 7.8          | 3.4          | 1.4          | .5           | 1.2   | 25.9  | 74.1               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .5    | .1  | 2.2 | 13.3 | 83.9 | 1237         |
| 06009         | .1   | .5    | .7  | 2.3 | 17.0 | 79.4 | 1474         |
| 12015         | .0   | .1    | .2  | 1.2 | 13.0 | 85.6 | 1233         |
| 18021         | .1   | .7    | .5  | 1.6 | 15.2 | 81.9 | 1467         |
| TOT           | 2    | 25    | 20  | 100 | 798  | 4466 | 5411         |
| PCT           | *    | .5    | .4  | 1.8 | 14.7 | 82.5 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .1            | .6         | 4.8         | 18.9            | 76.3              | 692          |
| 06009         | .4            | 1.5        | 6.6         | 26.0            | 67.4              | 685          |
| 12015         | .2            | .7         | 3.9         | 23.3            | 72.8              | 802          |
| 18021         | .0            | .0         | 4.4         | 24.0            | 71.6              | 721          |
| TOT           | 6             | 20         | 141         | 669             | 2090              | 2900         |
| PCT           | .2            | .7         | 4.9         | 23.1            | 72.1              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | .0    | .0    | .1    | .0     | 2            | .1          |
| 75/79  | .0   | .0    | .1    | .0    | .1    | *     | *     | .0     | 6            | .2          |
| 70/74  | .0   | *     | .2    | .5    | .9    | 1.4   | .9    | .3     | 108          | 4.2         |
| 65/69  | .0   | .0    | .2    | 4.2   | 11.8  | 18.5  | 14.1  | 6.1    | 1421         | 54.9        |
| 60/64  | .0   | .0    | .2    | 1.5   | 11.0  | 13.9  | 8.7   | 4.2    | 1021         | 39.5        |
| 55/59  | .0   | .0    | .0    | .0    | .2    | .4    | .3    | .2     | 28           | 1.1         |
| TOTAL  | 0    | 1     | 19    | 159   | 622   | 884   | 623   | 278    | 2586         | 100.0       |
| PCT    | .0   | *     | .7    | 6.1   | 24.1  | 34.2  | 24.1  | 10.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|------|-----|-----|-----|-----|-----|-----|------|
| 80/84 | .0   | .0   | .0   | .0  | .0  | .1  | .0  | .0  | .0  | .0   |
| 75/79 | *    | .0   | *    | .0  | *   | .0  | .1  | .1  | .0  | .0   |
| 70/74 | .4   | 1.0  | .6   | .4  | .6  | .5  | .3  | .2  | .0  | .1   |
| 65/69 | 5.6  | 14.9 | 8.4  | 7.5 | 6.2 | 5.5 | 2.8 | 2.1 | .0  | 2.0  |
| 60/64 | 7.6  | 19.8 | 5.0  | 1.3 | 1.3 | 1.2 | .6  | 1.4 | .0  | 1.2  |
| 55/59 | .3   | .6   | .0   | .0  | .0  | *   | *   | *   | .0  | .1   |
| TOTAL | 14.0 | 36.2 | 14.0 | 9.2 | 8.2 | 7.3 | 3.8 | 3.9 | .0  | 3.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 77  | 70  | 68  | 64  | 60 | 58 | 52  | 64.0 | 1689         |
| 06009         | 76  | 69  | 68  | 64  | 60 | 57 | 55  | 63.7 | 2180         |
| 12015         | 80  | 75  | 72  | 66  | 62 | 60 | 56  | 66.6 | 1505         |
| 18021         | 81  | 73  | 70  | 65  | 61 | 57 | 52  | 65.2 | 2246         |
| TOT           | 81  | 73  | 70  | 64  | 60 | 58 | 52  | 64.8 | 7620         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 3.3   | 19.5  | 36.4  | 27.1  | 13.7  | 77    | 657    |      |              |
| 06009         | .0   | 6.2   | 21.6  | 30.6  | 29.2  | 12.5  | 76    | 682    |      |              |
| 12015         | .0   | 10.8  | 29.2  | 33.1  | 19.9  | 7.1   | 72    | 695    |      |              |
| 18021         | .0   | 6.8   | 25.1  | 38.1  | 20.9  | 9.1   | 74    | 657    |      |              |
| TOT           | 0    | 184   | 643   | 928   | 652   | 284   | 75    | 2691   |      |              |

PERIOD: (PRIMARY) 1916-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1   | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | 1   | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | .0       | .1       | .0       | 4   | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | *        | .1       | .2       | .0       | .0       | 9   | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .0       | .3       | .4       | .3       | .1       | .0       | 38  | .0       | 1.1       |
| 6                  | .0       | .0       | .0       | *        | .2       | .3       | .1       | .0       | .0       | 20  | *        | .6        |
| 5                  | .0       | .0       | .0       | .1       | .8       | .8       | .3       | .0       | .0       | 70  | .1       | 2.0       |
| 4                  | .0       | .0       | .0       | .3       | 1.3      | .8       | .1       | .0       | .0       | 86  | .1       | 2.5       |
| 3                  | .0       | .0       | .0       | .7       | 2.0      | 1.5      | .1       | .0       | .0       | 145 | .1       | 4.1       |
| 2                  | .0       | .0       | .0       | 1.2      | 4.4      | 1.9      | .0       | .0       | .0       | 258 | .1       | 7.5       |
| 1                  | .0       | .0       | *        | 1.8      | 7.2      | 1.8      | .0       | .0       | .0       | 370 | .2       | 10.6      |
| 0                  | .0       | .0       | .1       | 3.8      | 11.5     | .6       | .1       | .0       | .0       | 544 | .4       | 15.5      |
| -1                 | .0       | .0       | .2       | 6.4      | 9.8      | .2       | *        | .0       | .0       | 571 | .4       | 16.2      |
| -2                 | .0       | .0       | .3       | 8.9      | 6.1      | .2       | *        | .0       | .0       | 530 | .4       | 15.1      |
| -3                 | .0       | .0       | .6       | 6.5      | 2.2      | *        | .0       | .0       | .0       | 319 | .1       | 9.2       |
| -4                 | .0       | .0       | .7       | 4.4      | .8       | .1       | .0       | .0       | .0       | 202 | .1       | 5.8       |
| -5                 | .0       | .0       | .7       | 2.3      | .5       | *        | .0       | .0       | .0       | 122 | .1       | 3.5       |
| -6                 | .0       | .0       | .8       | .9       | .1       | *        | .0       | .0       | .0       | 64  | *        | 1.8       |
| -7/-8              | *        | *        | .6       | .4       | .1       | .0       | .0       | .0       | .0       | 43  | .0       | 1.3       |
| -9/-10             | .0       | .2       | .2       | .1       | *        | .0       | .0       | .0       | .0       | 18  | .0       | .5        |
| -11/-13            | *        | .1       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 6   | .0       | .2        |
| -14/-16            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1   | .0       | *         |
| TOTAL              | 2        | 13       | 144      | 1291     | 1624     | 303      | 6        | 1        | 3422     | 71  | 3351     |           |
| PCT                | .1       | .4       | 4.2      | 37.7     | 47.5     | 8.9      | 1.1      | .2       | 100.0    | 2.1 | 97.9     |           |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | .9   | .1    | .0    | .0    | .0  | 1.7  | .5  | 1.5  | .2    | .0    | .0    | .0  | 2.2  |
| 1-2     | .1  | 3.0  | 1.4   | .0    | .0    | .0  | 4.5  | .2  | 5.9  | 3.1   | .0    | .0    | .0  | 9.3  |
| 3-4     | .0  | 1.5  | 2.7   | .2    | .0    | .0  | 4.4  | .2  | 3.2  | 7.1   | .3    | .0    | .0  | 10.8 |
| 5-6     | .0  | .1   | 2.0   | .3    | .0    | .0  | 2.4  | .0  | .7   | 5.0   | .6    | .0    | .0  | 6.3  |
| 7       | .0  | .1   | .4    | .4    | .0    | .0  | .9   | .0  | .0   | 1.7   | .7    | .0    | .0  | 2.3  |
| 8-9     | .0  | .0   | .3    | .1    | .0    | .0  | .3   | .0  | .1   | .8    | .5    | .0    | .0  | 1.4  |
| 10-11   | .0  | .0   | .2    | .1    | *     | .0  | .3   | .0  | .0   | .0    | .1    | *     | .0  | .1   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | .0    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .8  | 5.6  | 6.9   | 1.1   | *     | .0  | 14.5 | 1.0 | 11.3 | 17.9  | 2.2   | *     | .0  | 32.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | 1.7  | .1    | .0    | .0    | .0  | 2.1  | .2  | 1.0  | .2    | .0    | .0    | .0  | 1.3 |
| 1-2     | .3  | 4.3  | 1.1   | .0    | .0    | .0  | 5.7  | .1  | 2.4  | .9    | .0    | .0    | .0  | 3.3 |
| 3-4     | .1  | 1.7  | 2.0   | .1    | .0    | .0  | 3.8  | .0  | 1.0  | 1.6   | .1    | .0    | .0  | 2.7 |
| 5-6     | *   | .1   | .8    | .2    | .0    | .0  | 1.2  | *   | .3   | 1.0   | .3    | .0    | .0  | 1.5 |
| 7       | .0  | .1   | .4    | .2    | .0    | .0  | .7   | .0  | .1   | .4    | .2    | .0    | .0  | .7  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .2    | .2    | .0    | .0  | .3  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .1   | .0    | .0    | .1    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 7.9  | 4.4   | .5    | *     | .0  | 13.6 | .2  | 4.7  | 4.2   | .7    | .1    | .0  | 9.9 |

PERIOD: (OVER-ALL) 1963-1973

JANUARY

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .9   | .1    | .0    | .0    | .0  | 1.2 | .2  | .6   | .1    | .0    | .0    | .0  | .9  |
| 1-2     | .1  | 1.6  | .6    | .0    | .0    | .0  | 2.3 | .3  | 2.1  | .7    | .0    | .0    | .0  | 3.1 |
| 3-4     | .0  | 1.0  | 1.3   | .3    | .0    | .0  | 2.6 | .0  | 1.3  | 1.6   | .1    | .0    | .0  | 3.0 |
| 5-6     | .1  | .1   | 1.0   | .2    | .0    | .0  | 1.3 | .0  | .1   | .9    | .2    | .0    | .0  | 1.2 |
| 7       | .0  | .0   | .4    | .2    | .0    | .0  | .6  | .0  | .0   | .3    | .3    | .0    | .0  | .6  |
| 8-9     | .0  | .0   | .1    | .1    | .1    | .0  | .3  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 3.7  | 3.4   | 1.0   | .1    | .0  | 8.5 | .5  | 4.1  | 3.6   | .8    | .0    | .0  | 9.0 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .1  | .5   | .1    | .0    | .0    | .0  | .7  |           |
| 1-2     | .1  | 1.2  | .2    | .0    | .0    | .0  | 1.5 | .1  | 1.1  | .5    | .0    | .0    | .0  | 1.7 |           |
| 3-4     | .0  | .4   | .5    | .1    | .0    | .0  | .9  | .0  | .2   | .3    | .0    | .0    | .0  | .6  |           |
| 5-6     | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .1    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | 1.9  | 1.1   | .1    | .0    | .0  | 3.3 | .2  | 1.8  | 1.1   | .1    | .0    | .0  | 3.2 | 94.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 9.3  | 7.3  | .7    | .0    | .0    | .0  | 17.3  |         |
| 1-2     | 1.7  | 21.3 | 8.3   | .0    | .0    | .0  | 31.3  |         |
| 3-4     | .3   | 9.9  | 16.8  | 1.1   | .0    | .0  | 28.0  |         |
| 5-6     | .1   | 1.4  | 10.9  | 1.6   | .0    | .0  | 14.0  |         |
| 7       | .0   | .2   | 3.5   | 2.1   | .1    | .0  | 5.8   |         |
| 8-9     | .0   | .1   | 1.3   | 1.0   | .1    | .0  | 2.5   |         |
| 10-11   | .0   | .1   | .3    | .5    | .1    | .0  | .9    |         |
| 12      | .0   | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 13-16   | .0   | .0   | .0    | .0    | .1    | .0  | .1    |         |
| 17-19   | .0   | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 11.3 | 40.3 | 41.7  | 6.3   | .3    | .0  | 100.0 | 1951    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.2 | 11.2 | 11.7 | 6.5  | 2.8  | .7  | .4    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 842   | 3        |
| 6-7          | .0  | .8   | 4.4  | 5.5  | 3.6  | 1.2 | .5    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 386   | 5        |
| 8-9          | .0  | .5   | 2.3  | 2.7  | 2.6  | 1.2 | .9    | .3  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 260   | 6        |
| 10-11        | .0  | .6   | .6   | 1.1  | 1.3  | .9  | .5    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 124   | 6        |
| 12-13        | .0  | .0   | 1.1  | .7   | .4   | .5  | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 78    | 6        |
| >13          | .0  | .0   | .0   | .5   | .3   | .1  | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 36    | 8        |
| INDET        | 6.3 | 5.6  | 5.6  | 4.8  | 2.5  | 1.5 | .3    | .1  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 634   | 3        |
| TOTAL        | 200 | 444  | 609  | 512  | 315  | 142 | 81    | 28  | 23    | 6     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2360  | 4        |
| PCT          | 8.5 | 18.8 | 25.8 | 21.7 | 13.3 | 6.0 | 3.4   | 1.2 | 1.0   | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0004 CANARY ISLANDS  
28.0N 15.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .9                 | 1.1       | .5   | .0        | .0   | .0              | .0   | 2.4                     | 1.6            | .6        | .9          | .0                  | .4         | .1              | 94.1       |
| NE       | .6                 | .7        | .4   | .0        | .0   | .0              | .0   | 1.7                     | .3             | .1        | .6          | .0                  | .6         | .0              | 96.7       |
| E        | .4                 | .8        | .2   | .0        | .0   | .0              | .0   | 1.4                     | .4             | 1.0       | 1.8         | .4                  | 1.1        | .0              | 94.0       |
| SE       | .0                 | .6        | .3   | .0        | .0   | .0              | .0   | 1.0                     | .0             | 1.8       | 2.6         | .0                  | 1.5        | .0              | 93.2       |
| S        | 2.3                | 1.3       | .4   | .0        | .0   | .0              | .0   | 4.0                     | 3.1            | 1.5       | 1.1         | .0                  | .8         | .0              | 90.5       |
| SW       | 2.3                | 1.1       | .9   | .0        | .0   | .0              | .1   | 4.4                     | 3.3            | .7        | .7          | .0                  | .2         | .0              | 91.2       |
| W        | .7                 | 1.4       | .2   | .0        | .0   | .0              | .2   | 2.3                     | .9             | .9        | .7          | .0                  | .5         | .0              | 94.7       |
| NW       | 2.1                | 3.8       | .7   | .0        | .0   | .0              | .0   | 6.5                     | 1.7            | .6        | .3          | .0                  | .6         | .0              | 90.3       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .5                 | .0        | .5   | .0        | .0   | .0              | .0   | 1.0                     | .5             | .0        | 1.5         | .0                  | .5         | .0              | 96.5       |
| TOT PCT  | 1.1                | 1.2       | .5   | .0        | .0   | .0              | *    | 2.7                     | 1.3            | .6        | .9          | *                   | .6         | *               | 93.9       |
| TOT OBS: | 3735               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | 1.4                | .8        | .2   | .0        | .0   | .0              | .0   | 2.3                     | 1.7            | 1.0       | .8          | .1                  | .8         | .0              | 93.3       |
| 06009      | .7                 | 1.0       | .7   | .0        | .0   | .0              | .0   | 2.4                     | .8             | 1.3       | .8          | .0                  | .5         | .0              | 94.4       |
| 12015      | .4                 | .9        | .5   | .0        | .0   | .0              | .1   | 1.8                     | 1.7            | .0        | .9          | .0                  | .7         | .0              | 94.9       |
| 18021      | 1.7                | 2.0       | .4   | .0        | .0   | .0              | .0   | 4.1                     | 1.0            | .5        | 1.1         | .0                  | .6         | .1              | 93.0       |
| TOT PCT    | 1.0                | 1.2       | .5   | .0        | .0   | .0              | *    | 2.7                     | 1.3            | .7        | .9          | *                   | .6         | *               | 93.9       |
| TOT OBS:   | 3916               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | .9                 | 8.1  | 7.7   | 1.4   | .1    | .0  |      | 18.1      | 11.9     | 19.2     | 24.7       | 17.6  | 17.7  | 17.0  | 20.6  | 18.2  | 17.9  |    |
| NE       | 1.0                | 13.4 | 15.4  | 3.9   | .2    | .0  |      | 39.1      | 12.7     | 33.8     | 24.4       | 33.5  | 38.7  | 30.5  | 23.3  | 31.4  | 38.1  |    |
| E        | .8                 | 5.2  | 2.9   | .3    | *     | .0  |      | 9.3       | 9.7      | 8.9      | 3.5        | 8.9   | 12.6  | 9.9   | 9.7   | 7.7   | 10.6  |    |
| SE       | .7                 | 2.4  | 1.1   | .1    | .0    | .0  |      | 4.2       | 8.3      | 2.8      | .3         | 3.8   | 3.7   | 5.7   | 3.9   | 4.9   | 4.5   |    |
| S        | .6                 | 2.9  | 1.7   | .2    | *     | .0  |      | 5.5       | 9.7      | 4.8      | 2.5        | 5.4   | 4.4   | 7.3   | 8.9   | 6.1   | 3.5   |    |
| SW       | .8                 | 5.1  | 3.2   | .5    | .1    | .0  |      | 9.7       | 10.5     | 10.4     | 17.1       | 8.8   | 6.4   | 10.9  | 11.1  | 10.7  | 6.8   |    |
| W        | .5                 | 4.5  | 2.7   | .4    | *     | .0  |      | 8.1       | 10.4     | 8.1      | 12.7       | 8.5   | 5.9   | 7.2   | 14.7  | 9.2   | 6.7   |    |
| NW       | .6                 | 4.2  | 2.5   | .5    | *     | .0  |      | 7.9       | 10.4     | 7.2      | 12.3       | 8.8   | 8.7   | 7.1   | 4.4   | 7.7   | 8.6   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 4.2                |      |       |       |       |     |      | 4.2       | .0       | 4.8      | 2.5        | 4.9   | 1.8   | 4.4   | 3.3   | 4.0   | 3.4   |    |
| TOT OBS  | 646                | 2974 | 2421  | 428   | 30    | 0   | 6499 |           | 10.8     | 1339     | 79         | 1336  | 510   | 1290  | 90    | 1271  | 584   |    |
| TOT PCT  | 9.9                | 45.8 | 37.3  | 6.6   | .5    | .0  |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 4.2                | 9.2  | 4.3   | .3    | *   |           | 18.1     | 11.9     | 19.5       | 17.6  | 17.2  | 18.1  |    |
| NE       | 5.3                | 18.7 | 8.4   | .8    | *   |           | 33.1     | 12.7     | 33.3       | 35.0  | 30.0  | 33.5  |    |
| E        | 3.1                | 4.9  | 1.1   | .1    | *   |           | 9.3      | 9.7      | 8.6        | 9.9   | 9.9   | 8.6   |    |
| SE       | 1.9                | 2.0  | .3    | .0    | .0  |           | 4.2      | 8.3      | 2.7        | 3.8   | 5.6   | 4.8   |    |
| S        | 2.1                | 2.7  | .6    | .1    | .0  |           | 5.5      | 9.7      | 4.7        | 5.1   | 7.4   | 5.3   |    |
| SW       | 3.0                | 5.2  | 1.2   | .2    | *   |           | 9.7      | 10.5     | 10.7       | 8.1   | 10.9  | 9.4   |    |
| W        | 2.3                | 4.6  | 1.1   | .1    | .0  |           | 8.1      | 10.4     | 8.4        | 7.8   | 7.7   | 8.4   |    |
| NW       | 2.4                | 4.2  | 1.1   | .2    | .0  |           | 7.9      | 10.4     | 7.5        | 8.7   | 6.9   | 8.0   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 4.2                |      |       |       |     |           | 4.2      | .0       | 4.7        | 4.0   | 4.3   | 3.8   |    |
| TOT OBS  | 1855               | 3348 | 1177  | 114   | 5   | 6499      |          | 10.8     | 1418       | 1846  | 1380  | 1855  |    |
| TOT PCT  | 28.5               | 51.5 | 18.1  | 1.8   | .1  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

# FEBRUARY

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28.0N 15.0W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4+* | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 4.7  | 5.7 | 46.6 | 36.5               | 6.2   | .3    | .0  | 10.6  | 100.0    | 1418      |
| 06009 | 4.0  | 5.4 | 45.5 | 37.3               | 7.3   | .5    | .0  | 11.0  | 100.0    | 1846      |
| 12015 | 4.3  | 6.3 | 45.1 | 37.5               | 6.4   | .3    | .0  | 10.8  | 100.0    | 1380      |
| 18021 | 3.8  | 5.8 | 45.9 | 37.5               | 6.3   | .6    | .0  | 10.9  | 100.0    | 1855      |
| TOT   | 271  | 375 | 2974 | 2421               | 428   | 30    | 0   | 10.8  |          | 6499      |
| PCT   | 4.2  | 5.8 | 45.8 | 37.3               | 6.6   | .5    | .0  | 100.0 |          |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 7.7  | 5.2  | 4.3  | 1.1          |              | 3.2                    |
| NE       | 11.7 | 6.0  | 5.9  | 1.5          |              | 3.0                    |
| E        | 3.4  | 1.1  | 1.3  | .6           |              | 2.8                    |
| SE       | 1.3  | .8   | 1.2  | .7           |              | 4.1                    |
| S        | 2.1  | 1.6  | 2.5  | .8           |              | 4.1                    |
| SW       | 4.1  | 2.1  | 5.3  | 2.0          |              | 4.3                    |
| W        | 4.6  | 2.5  | 2.8  | .8           |              | 3.4                    |
| NW       | 3.5  | 3.1  | 2.1  | .5           |              | 3.3                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 3.2  | 1.2  | 1.2  | .4           |              | 2.6                    |
| TOT OBS  | 1190 | 671  | 757  | 238          | 2856         | 3.4                    |
| TOT PCT  | 41.7 | 23.5 | 26.5 | 8.3          | 100.0        |                        |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .0         | .1         | .3         | 1.2          | 1.5          | .6           | .4           | .1           | .1    | 14.1               |              |
| NE      | .0         | .0         | .0         | .4         | 1.5          | 1.6          | 1.0          | .3           | .1           | .1    | 20.1               |              |
| E       | .0         | .0         | .0         | .0         | .4           | .3           | .3           | .1           | .1           | .1    | 5.0                |              |
| SE      | .0         | .0         | .0         | .1         | .1           | .4           | .1           | .1           | .0           | .2    | 2.9                |              |
| S       | .0         | .0         | .1         | .2         | .6           | .8           | .2           | .1           | .1           | .1    | 4.7                |              |
| SW      | .1         | .0         | .2         | .7         | 1.2          | 1.7          | .4           | .1           | .1           | .2    | 8.9                |              |
| W       | .0         | .0         | .0         | .4         | .9           | .6           | .2           | .1           | .2           | .1    | 8.1                |              |
| NW      | .1         | .0         | .1         | .2         | .6           | .5           | .1           | .1           | .0           | .1    | 7.4                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .1         | .2           | .4           | .3           | .0           | .1           | .0    | 4.8                |              |
| TOT OBS | 5          | 1          | 12         | 67         | 194          | 225          | 92           | 39           | 23           | 26    | 2172               | 2856         |
| TOT PCT | .2         | .0         | .4         | 2.3        | 6.8          | 7.9          | 3.2          | 1.4          | .8           | .9    | 76.1               | 100.0        |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.5       | 1.8  | 1.8  | 1.8  | 1.8  | 1.8  | 1.8   | 1.8  |
| >5000             | 2.5       | 3.0  | 3.1  | 3.1  | 3.1  | 3.1  | 3.1   | 3.1  |
| >3500             | 5.2       | 6.3  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3   | 6.3  |
| >2000             | 11.1      | 13.8 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1  | 14.1 |
| >1000             | 16.6      | 20.3 | 20.8 | 20.8 | 20.8 | 20.8 | 20.8  | 20.8 |
| >600              | 18.3      | 22.6 | 23.1 | 23.1 | 23.1 | 23.1 | 23.1  | 23.1 |
| >300              | 18.8      | 23.0 | 23.6 | 23.6 | 23.6 | 23.6 | 23.6  | 23.6 |
| >150              | 18.8      | 23.1 | 23.6 | 23.6 | 23.6 | 23.6 | 23.6  | 23.6 |
| >0                | 18.9      | 23.2 | 23.7 | 23.8 | 23.8 | 23.8 | 23.8  | 23.8 |
| TOTAL             | 557       | 685  | 701  | 702  | 702  | 702  | 703   | 703  |

TOTAL NUMBER OF OBS: 2954

PCT FREQ NH <5/8: 76.2

TABLE 7A

## PERCENTAGE FREQ OF LGM CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|-----|-------|--------------|
| 24.1 | 13.9 | 14.6 | 13.0 | 9.7 | 5.3 | 6.9 | 6.0 | 6.3 | .1    | 3164         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | *   | .0  | *   | .1   | *   | *   | .0  | .0   | .0    | .2           |
|              | TOT %  | .0   | .0   | *   | .0  | *   | .1   | *   | *   | .0  | .0   | .0    | .2           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .1   | *   | .1  | .1  | .0   | .0  | .0  | .0  | .0   | .0    | .4           |
|              | TOT %  | .1   | .1   | *   | .1  | .1  | .0   | .0  | .0  | .0  | .0   | .0    | .4           |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | *   | .0   | *   | *   | .0  | .0   | .1    |              |
|              | NO PCP | .1   | .1   | *   | .0  | .0  | .0   | .0  | *   | .0  | .0   | .2    |              |
|              | TOT %  | .1   | .1   | *   | .0  | *   | .0   | *   | .1  | .0  | .0   | .3    |              |
| 2<5          | PCP    | .1   | .0   | .0  | .0  | .0  | .0   | *   | *   | .0  | .0   | .1    |              |
|              | NO PCP | .2   | .2   | .2  | .2  | .1  | .2   | .1  | *   | .0  | *    | 1.1   |              |
|              | TOT %  | .2   | .2   | .2  | .2  | .1  | .2   | .1  | .1  | .0  | *    | 1.2   |              |
| 5<10         | PCP    | .2   | .3   | *   | .0  | .2  | .3   | .1  | .4  | .0  | .0   | 1.5   |              |
|              | NO PCP | 3.8  | 4.6  | 1.5 | .9  | 1.6 | 2.1  | 1.1 | 1.1 | .0  | 1.2  | 18.0  |              |
|              | TOT %  | 4.0  | 5.0  | 1.6 | .9  | 1.8 | 2.4  | 1.2 | 1.4 | .0  | 1.2  | 19.5  |              |
| 10+          | PCP    | .1   | .1   | .1  | *   | .1  | .2   | .1  | .2  | .0  | .1   | 1.0   |              |
|              | NO PCP | 14.2 | 20.6 | 4.9 | 3.0 | 5.0 | 9.9  | 8.4 | 7.2 | .0  | 4.2  | 77.4  |              |
|              | TOT %  | 14.4 | 20.7 | 5.0 | 3.0 | 5.1 | 10.2 | 8.5 | 7.3 | .0  | 4.2  | 78.4  |              |
| TOT OBS      |        |      |      |     |     |     |      |     |     |     |      |       | 3727         |
| TOT PCT      |        | 18.8 | 26.1 | 6.8 | 4.1 | 7.1 | 12.8 | 9.9 | 8.9 | .0  | 5.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW   | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|------|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | *   | .0  | .0  | *    | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | .0   | *    | *   | *   | *   | *    | *   | *   | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .0   | *    | *   | *   | *   | *    | *   | *   | .0  | .0   | .2    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .0  | .1  | *   | .0   | .0  | .0  | .0  | .0   | .2    |              |
|              | 11-21      | *    | *    | *   | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .1    |              |
|              | 22+        | *    | *    | .0  | .0  | .0  | .0   | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .1   | *   | .1  | *   | .0   | .0  | .0  | .0  | .0   | .3    |              |
| 1<2          | 0-3        | .0   | *    | *   | .0  | .0  | .0   | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0  | .0  | .0  | .0   | *   | *   | .0  | .0   | .1    |              |
|              | 11-21      | *    | *    | *   | .0  | *   | .0   | *   | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | *   | .0  | .0  | .0   | .0  | *   | .0  | .0   | *     |              |
|              | TOT %      | .1   | .1   | *   | .0  | *   | .0   | *   | *   | .0  | .0   | .3    |              |
| 2<5          | 0-3        | .0   | *    | .0  | *   | *   | .0   | .0  | .0  | .0  | *    | .1    |              |
|              | 4-10       | .1   | .1   | .1  | .1  | *   | .1   | *   | .0  | .0  | .0   | .5    |              |
|              | 11-21      | .1   | .1   | *   | .1  | .1  | .1   | .1  | .1  | .0  | .0   | .6    |              |
|              | 22+        | *    | .0   | *   | *   | *   | *    | .0  | *   | .0  | .0   | .2    |              |
|              | TOT %      | .2   | .2   | .2  | .2  | .1  | .3   | .1  | .1  | .0  | *    | 1.4   |              |
| 5<10         | 0-3        | .2   | .1   | .1  | .1  | .1  | .1   | *   | .1  | .0  | .9   | 1.7   |              |
|              | 4-10       | 1.5  | 1.9  | .8  | .5  | .8  | 1.0  | .5  | .7  | .0  | .7   | 7.6   |              |
|              | 11-21      | 1.5  | 2.3  | .6  | .2  | .4  | .7   | .4  | .4  | .0  | .6   | 6.8   |              |
|              | 22+        | .4   | .7   | *   | *   | .1  | .1   | *   | .1  | .0  | .1   | 1.5   |              |
|              | TOT %      | 3.6  | 5.0  | 1.5 | .8  | 1.5 | 1.9  | 1.0 | 1.2 | .0  | .9   | 17.5  |              |
| 10+          | 0-3        | .7   | .8   | .5  | .6  | .5  | .7   | .5  | .6  | .0  | 3.6  | 8.4   |              |
|              | 4-10       | 6.9  | 10.3 | 3.6 | 1.9 | 2.5 | 4.5  | 4.3 | 3.8 | .0  | .0   | 37.9  |              |
|              | 11-21      | 6.4  | 11.9 | 1.9 | .8  | 1.4 | 2.9  | 2.3 | 2.2 | .0  | .0   | 29.8  |              |
|              | 22+        | .9   | 2.2  | .1  | *   | .2  | .3   | .3  | .3  | .0  | .0   | 4.3   |              |
|              | TOT %      | 14.9 | 25.2 | 6.2 | 3.3 | 4.5 | 8.4  | 7.4 | 6.8 | .0  | 3.6  | 80.4  |              |
| TOT OBS      |            |      |      |     |     |     |      |     |     |     |      |       | 5106         |
| TOT PCT      |            | 18.9 | 30.6 | 8.0 | 4.3 | 6.2 | 10.6 | 8.6 | 8.2 | .0  | 4.5  | 100.0 |              |



## FEBRUARY

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL       | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|----------|-------------|--------------------|---------------|
| 00003          | .1         | .0         | .3         | 2.9        | 5.7          | 5.9          | 1.9          | .8           | .5           | 1.0      | 19.1        | 80.9               | 734           |
| 06009          | .4         | .1         | .1         | 1.5        | 6.6          | 6.8          | 3.9          | 1.1          | .6           | 1.1      | 22.2        | 77.8               | 725           |
| 12015          | .0         | .1         | .1         | 2.1        | 6.7          | 7.4          | 3.9          | 1.8          | .9           | 1.1      | 24.1        | 75.9               | 850           |
| 18021          | .1         | .0         | 1.1        | 2.3        | 6.5          | 9.7          | 2.9          | 1.3          | 1.0          | .6       | 25.7        | 74.3               | 783           |
| TOT<br>PCT     | 5<br>.2    | 2<br>.1    | 13<br>.4   | 68<br>2.2  | 198<br>6.4   | 231<br>7.5   | 98<br>3.2    | 39<br>1.3    | 24<br>.8     | 29<br>.9 | 707<br>22.9 | 2385<br>77.1       | 3092<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1    | 1<2      | 2<5       | 5<10        | 10+          | TOTAL<br>OBS  |
|----------------|---------|----------|----------|-----------|-------------|--------------|---------------|
| 00003          | .3      | .2       | .2       | 1.5       | 14.8        | 83.1         | 1195          |
| 06009          | .2      | .3       | .6       | 1.4       | 21.4        | 76.1         | 1449          |
| 12015          | .1      | .4       | .3       | 1.2       | 14.7        | 83.2         | 1223          |
| 18021          | .1      | .4       | .2       | 1.3       | 18.9        | 79.0         | 1420          |
| TOT<br>PCT     | 9<br>.2 | 17<br>.3 | 17<br>.3 | 72<br>1.4 | 936<br>17.7 | 4236<br>80.1 | 5287<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|--------------|------------|-------------|-----------------|-------------------|---------------|
| 00003          | .1           | .4         | 5.0         | 16.2            | 78.8              | 685           |
| 06009          | .4           | .9         | 3.7         | 20.8            | 75.6              | 684           |
| 12015          | .0           | .2         | 3.5         | 21.6            | 74.8              | 823           |
| 18021          | .1           | 1.3        | 4.3         | 22.0            | 73.6              | 762           |
| TOT<br>PCT     | 5<br>.2      | 21<br>.7   | 121<br>4.1  | 599<br>20.3     | 2234<br>75.6      | 2954<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 1            | *           |
| 75/79  | .0   | .0    | .0    | *     | *     | .1    | .0    | .0     | 4            | .2          |
| 70/74  | .0   | .0    | .1    | .5    | .8    | 1.5   | 1.4   | .3     | 119          | 4.5         |
| 65/69  | .0   | .0    | .2    | 2.1   | 6.7   | 14.8  | 15.0  | 8.3    | 1239         | 47.2        |
| 60/64  | .0   | .0    | .3    | 2.6   | 11.4  | 16.3  | 10.9  | 4.7    | 1214         | 46.3        |
| 55/59  | .0   | .0    | .0    | .0    | .3    | .7    | .5    | .3     | 47           | 1.8         |
| TOTAL  | 0    | 0     | 16    | 139   | 508   | 876   | 730   | 355    | 2624         | 100.0       |
| PCT    | .0   | .0    | .6    | 5.3   | 19.4  | 33.4  | 27.8  | 13.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW   | W    | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|------|------|-----|-----|------|
| 80/84 | .0   | .0   | .0  | .0  | *   | .0   | .0   | .0  | .0  | .0   |
| 75/79 | *    | *    | .0  | .0  | .0  | .1   | .0   | *   | .0  | .0   |
| 70/74 | .6   | .9   | .4  | .4  | .5  | .8   | .5   | .3  | .0  | .2   |
| 65/69 | 6.8  | 8.8  | 3.2 | 2.6 | 3.9 | 8.9  | 7.0  | 4.2 | .0  | 1.8  |
| 60/64 | 11.0 | 16.8 | 3.2 | 1.2 | 2.2 | 2.9  | 4.7  | .0  | .0  | 1.9  |
| 55/59 | .7   | .5   | .1  | .0  | .0  | *    | .1   | .4  | .0  | .0   |
| TOTAL | 19.1 | 27.1 | 6.9 | 4.3 | 6.6 | 12.1 | 10.4 | 9.6 | .0  | 3.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 73  | 69  | 68  | 64  | 59 | 56 | 48  | 63.5 | 1452         |
| 06009          | 73  | 69  | 67  | 63  | 59 | 53 | 48  | 63.0 | 1887         |
| 12015          | 84  | 76  | 71  | 66  | 61 | 55 | 49  | 66.2 | 1386         |
| 18021          | 81  | 73  | 70  | 65  | 61 | 57 | 50  | 65.1 | 1861         |
| TOT            | 84  | 73  | 70  | 64  | 60 | 55 | 48  | 64.4 | 6586         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 3.2   | 15.3  | 33.0  | 28.5  | 20.0   | 79   | 681          |
| 06009          | .0   | 4.0   | 16.6  | 31.1  | 33.3  | 15.0   | 78   | 694          |
| 12015          | .0   | 10.7  | 24.8  | 32.6  | 23.1  | 8.9    | 74   | 694          |
| 18021          | .0   | 5.3   | 19.9  | 36.7  | 27.3  | 10.8   | 76   | 693          |
| TOT            | 0    | 16.1  | 52.9  | 92.1  | 77.4  | 37.7   | 77   | 2762         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | 2     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0       | 5     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .1       | .0       | 12    | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .3       | .1       | .0       | 24    | *        | .6        |
| 7/8                | .0       | .0       | .0       | .0       | *        | .1       | .6       | .3       | *        | .0       | 38    | *        | 1.0       |
| 6                  | .0       | .0       | .0       | .0       | .1       | .2       | .6       | .1       | .0       | .0       | 31    | *        | .8        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .9       | .8       | .1       | .0       | .0       | 70    | .0       | 2.0       |
| 4                  | .0       | .0       | .0       | .0       | .2       | 1.1      | 1.3      | .1       | .0       | .0       | 101   | .1       | 2.8       |
| 3                  | .0       | .0       | .0       | .0       | .3       | 2.2      | 1.4      | *        | .0       | .0       | 139   | .0       | 3.9       |
| 2                  | .0       | .0       | .0       | *        | .9       | 4.7      | 1.8      | .0       | .0       | .0       | 265   | .2       | 7.2       |
| 1                  | .0       | .0       | .0       | .0       | 2.4      | 7.8      | 1.4      | .0       | .0       | .0       | 416   | .1       | 11.5      |
| 0                  | .0       | .0       | *        | .1       | 5.9      | 10.3     | .3       | .0       | .0       | .0       | 596   | .2       | 16.5      |
| -1                 | .0       | .0       | *        | .6       | 8.8      | 7.5      | .3       | .0       | .0       | .0       | 619   | .2       | 17.1      |
| -2                 | .0       | .0       | *        | .5       | 9.7      | 3.8      | .1       | .0       | .0       | .0       | 505   | .1       | 14.0      |
| -3                 | .0       | .0       | .0       | .7       | 6.7      | 1.1      | *        | .0       | .0       | .0       | 304   | .1       | 8.4       |
| -4                 | .0       | .0       | .0       | 1.2      | 4.1      | .4       | .0       | .0       | .0       | .0       | 206   | .0       | 5.8       |
| -5                 | .0       | .0       | *        | .8       | 1.9      | .2       | .0       | .0       | .0       | .0       | 108   | *        | 3.0       |
| -6                 | .0       | .0       | .2       | .4       | .4       | .1       | .0       | .0       | .0       | .0       | 47    | *        | 1.3       |
| -7/-8              | .0       | .0       | .4       | .4       | .3       | *        | .0       | .0       | .0       | .0       | 39    | .0       | 1.1       |
| -9/-10             | .0       | .2       | .4       | .1       | *        | .0       | .0       | .0       | .0       | .0       | 25    | .0       | .7        |
| -11/-13            | *        | .3       | .2       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 19    | *        | .5        |
| -14/-16            | *        | .1       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 8     | .0       | .2        |
| -17/-19            | *        | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| TOTAL              | 3        | 20       | 48       | 176      | 1510     | 1454     | 314      | 42       | 12       | 3        | 3582  | 34       | 3548      |
| PCT                | .1       | .6       | 1.3      | 4.9      | 42.2     | 40.6     | 8.8      | 1.2      | .3       | .1       | 100.0 | .9       | 99.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 1.6  | .1    | .0    | .0    | .0  | 2.4  | .4  | 1.2  | .1    | .0    | .0    | .0  | 1.6  |
| 1-2     | .3  | 4.8  | 1.2   | .0    | .0    | .0  | 6.2  | .6  | 6.1  | 1.7   | .0    | .0    | .0  | 8.3  |
| 3-4     | .1  | 1.8  | 2.6   | *     | .0    | .0  | 4.6  | .1  | 2.2  | 3.6   | .1    | .0    | .0  | 5.9  |
| 5-6     | .0  | .3   | 1.9   | .3    | .0    | .0  | 2.6  | .0  | .5   | 2.8   | .4    | .0    | .0  | 3.7  |
| 7       | .0  | .1   | .5    | .2    | .1    | .0  | 1.0  | .0  | .1   | 1.3   | .7    | .0    | .0  | 2.0  |
| 8-9     | .0  | .0   | .2    | .4    | .0    | .0  | .8   | .0  | .1   | .4    | .2    | .0    | .0  | .8   |
| 10-11   | .0  | .1   | .2    | .1    | .0    | .0  | .4   | .0  | .0   | .1    | .4    | .0    | .0  | .5   |
| 12      | .0  | .0   | .0    | .0    | .1    | .0  | .1   | .0  | .0   | .1    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .1    | .0    | .1    | .0  | .1   | .0  | .0   | .1    | .0    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 8.7  | 7.0   | 1.0   | .2    | .0  | 18.1 | 1.0 | 10.1 | 10.0  | 1.9   | .0    | .0  | 23.0 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .7   | .1    | .0    | .0    | .0  | 1.1 | .4  | .6   | .1    | .0    | .0    | .0  | 1.1 |
| 1-2     | .4  | 2.2  | .5    | .0    | .0    | .0  | 3.1 | .0  | 1.3  | .3    | .0    | .0    | .0  | 1.6 |
| 3-4     | *   | .8   | .5    | .0    | .0    | .0  | 1.4 | *   | .5   | .4    | .0    | .0    | .0  | .9  |
| 5-6     | .0  | .1   | .5    | .0    | .0    | .0  | .6  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |
| 7       | .0  | .1   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 3.9  | 1.8   | .0    | .0    | .0  | 6.4 | .4  | 2.4  | 1.1   | .0    | .0    | .0  | 3.9 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .8   | .1    | .0    | .0    | .0  | 1.2 | .2  | 1.2  | .1    | .0    | .0    | .0  | 1.5  |
| 1-2     | .3  | 2.6  | .7    | .0    | .0    | .0  | 3.6 | .6  | 3.6  | 1.0   | .0    | .0    | .0  | 5.2  |
| 3-4     | .0  | .7   | 1.0   | .0    | .0    | .0  | 1.7 | .2  | 1.8  | 1.9   | .0    | .0    | .0  | 3.9  |
| 5-6     | .0  | .2   | .6    | .0    | .1    | .0  | .8  | .0  | .2   | 1.3   | .1    | .1    | .0  | 1.6  |
| 7       | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .1   | .5    | .1    | .0    | .0  | .6   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .3    | .2    | .0    | .0  | .4   |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 4.2  | 2.6   | .1    | .1    | .0  | 7.6 | 1.0 | 6.9  | 5.1   | .4    | .1    | .0  | 13.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .4  | .9   | .0    | .0    | .0    | .0  | 1.4  | .6  | .9   | .0    | .0    | .0    | .0  | .0  | 1.5       |
| 1-2     | .0  | 3.7  | .9    | .0    | .0    | .0  | 4.6  | .4  | 2.7  | .7    | .0    | .0    | .0  | .0  | 3.8       |
| 3-4     | .1  | 1.4  | 1.1   | .0    | .0    | .0  | 2.5  | .0  | .9   | .9    | .1    | .0    | .0  | .0  | 1.9       |
| 5-6     | .1  | .4   | .7    | .1    | .0    | .0  | 1.3  | .0  | .3   | .8    | .3    | .0    | .0  | .0  | 1.4       |
| 7       | .0  | .1   | .2    | .0    | .0    | .0  | .3   | .0  | .1   | .3    | .1    | .0    | .0  | .0  | .5        |
| 8-9     | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | .0   | .2    | .0    | .0    | .0  | .0  | .2        |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .0    | .0  | .0  | .1        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .6  | 6.5  | 3.3   | .2    | .0    | .0  | 10.5 | .9  | 5.0  | 3.0   | .5    | .0    | .0  | 9.3 | 92.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 12.2 | 8.0  | .5    | .0    | .0    | .0  | 20.7  |         |
| 1-2     | 2.6  | 26.7 | 6.9   | .0    | .0    | .0  | 36.2  |         |
| 3-4     | .6   | 9.9  | 11.9  | .2    | .0    | .0  | 22.4  |         |
| 5-6     | .1   | 1.9  | 8.7   | 1.1   | .1    | .0  | 11.9  |         |
| 7       | .0   | .5   | 3.0   | 1.1   | .1    | .0  | 4.7   |         |
| 8-9     | .0   | .1   | 1.5   | .9    | .0    | .0  | 2.5   |         |
| 10-11   | .0   | .1   | .5    | .6    | .0    | .0  | 1.2   |         |
| 12      | .0   | .0   | .1    | .2    | .1    | .0  | .3    |         |
| 13-16   | .0   | .0   | .1    | .0    | .1    | .0  | .2    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 15.5 | 47.0 | 33.1  | 4.0   | .3    | .0  | 100.0 | 1947    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.7 | 10.2 | 9.8  | 5.6  | 2.4  | 1.2 | .1    | .0  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 760      |
| 6-7          | .0  | 1.1  | 4.2  | 6.1  | 3.3  | 1.4 | .8    | .3  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 421      |
| 8-9          | .0  | .6   | 1.6  | 2.2  | 2.7  | 1.3 | 1.3   | .3  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 250      |
| 10-11        | .0  | 1.2  | .6   | 1.1  | 1.5  | 1.0 | .3    | .3  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 150      |
| 12-13        | .0  | .0   | 1.1  | 1.0  | .4   | .3  | .1    | .2  | .2    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 79       |
| >13          | .0  | .0   | .0   | .3   | .3   | .4  | .2    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 39       |
| INDET        | 7.2 | 6.7  | 5.2  | 3.4  | 3.1  | .8  | 1.1   | .4  | .4    | .0    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 667      |
| TOTAL        | 235 | 468  | 532  | 468  | 323  | 151 | 91    | 41  | 49    | 3     | 3     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2366     |
| PCT          | 9.9 | 19.8 | 22.5 | 19.8 | 13.7 | 6.4 | 3.8   | 1.7 | 2.1   | .1    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |  |
| N                  | .3   | 1.2       | .1   | .0        | .0   | .0              | .0   | 1.6             | .6             | .3                      | 1.2         | .0                  | .7         | .0                   | 95.7       |  |
| NE                 | .5   | .2        | .1   | .0        | .0   | .0              | .0   | .8              | .1             | .3                      | 1.8         | .0                  | 1.5        | .1                   | 95.5       |  |
| E                  | .6   | 2.8       | .0   | .0        | .0   | .0              | .0   | 3.4             | .0             | .6                      | 4.8         | .0                  | 2.9        | .5                   | 87.8       |  |
| SE                 | 1.6  | .8        | .0   | .0        | .0   | .0              | .0   | 2.3             | .0             | 4.7                     | 4.7         | .0                  | 3.1        | .0                   | 85.2       |  |
| S                  | .0   | 2.0       | .0   | .0        | .0   | .0              | .0   | 2.0             | 2.0            | .0                      | 3.5         | .0                  | 1.0        | .0                   | 91.5       |  |
| SW                 | .4   | 2.7       | .0   | .0        | .0   | .0              | .0   | 3.1             | 2.0            | 1.0                     | .4          | .0                  | .0         | .0                   | 93.4       |  |
| W                  | 1.2  | 2.5       | .3   | .0        | .0   | .0              | .0   | 3.9             | 1.4            | 1.4                     | .8          | .0                  | .2         | .0                   | 92.3       |  |
| NW                 | 1.1  | .9        | .9   | .0        | .0   | .0              | .0   | 2.7             | 3.5            | 1.5                     | .9          | .0                  | 1.0        | .0                   | 90.6       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |  |
| CALM               | .8   | .8        | .0   | .0        | .0   | .0              | .0   | 1.6             | .0             | .0                      | 1.6         | .8                  | .0         | .0                   | 96.1       |  |
| TOT PCT            | .6   | 1.1       | .2   | .0        | .0   | .0              | .0   | 1.8             | .9             | .6                      | 1.6         | *                   | 1.1        | .1                   | 94.0       |  |
| TOT OBS:           | 3943 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .7                 | 1.2          | .2   | .0           | .0   | .0                    | .0   | 2.0                     | .9                | .9           | 1.4            | .0                        | .8            | .1                                    | 94.1             |
| 06009         | .6                 | 2.1          | .3   | .0           | .0   | .0                    | .0   | 2.9                     | 1.0               | 1.7          | 1.6            | .0                        | .5            | .0                                    | 92.4             |
| 12015         | .7                 | .9           | .2   | .0           | .0   | .0                    | .0   | 1.8                     | .9                | .0           | 1.0            | .1                        | 1.4           | .1                                    | 94.6             |
| 18021         | .4                 | .4           | .1   | .0           | .0   | .0                    | .0   | .8                      | .7                | .1           | 2.3            | .0                        | 1.6           | .0                                    | 94.5             |
| TOT PCT       | .6                 | 1.1          | .2   | .0           | .0   | .0                    | .0   | 1.9                     | .9                | .7           | 1.6            | *                         | 1.1           | *                                     | 93.9             |
| TOT OBS:      | 4133               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.4                | 9.3  | 10.3  | 2.1   | .2    | .0  |       | 23.3      | 12.4     |          | 22.2       | 22.7  | 25.0  | 21.2  | 23.2  | 29.9  | 24.1  | 21.3  |
| NE       | 1.4                | 14.0 | 18.7  | 4.8   | .3    | .0  |       | 39.2      | 13.4     |          | 41.3       | 40.7  | 38.0  | 41.2  | 37.6  | 36.2  | 38.7  | 40.1  |
| E        | .5                 | 3.2  | 1.8   | .4    | *     | .0  |       | 5.9       | 10.4     |          | 6.1        | 2.3   | 5.7   | 7.8   | 5.9   | 2.3   | 5.6   | 6.1   |
| SE       | .3                 | 1.1  | .3    | *     | .0    | .0  |       | 1.7       | 7.9      |          | 1.2        | 1.7   | 1.5   | 2.1   | 3.0   | 1.2   | 1.4   | 1.4   |
| S        | .5                 | 1.3  | .7    | .2    | *     | .0  |       | 2.6       | 9.4      |          | 2.2        | .0    | 2.1   | 2.3   | 3.7   | 2.6   | 2.6   | 3.4   |
| SW       | .7                 | 2.8  | 1.7   | .5    | *     | .0  |       | 5.8       | 10.6     |          | 5.3        | 2.7   | 5.2   | 5.2   | 6.6   | 1.6   | 6.4   | 6.4   |
| W        | .6                 | 4.0  | 2.6   | .7    | .1    | .0  |       | 8.1       | 11.5     |          | 7.7        | 8.7   | 8.4   | 8.3   | 7.6   | 11.7  | 8.7   | 7.1   |
| NW       | .6                 | 4.8  | 3.6   | .9    | *     | .0  |       | 10.1      | 11.5     |          | 9.9        | 18.7  | 10.2  | 8.6   | 9.4   | 11.7  | 10.2  | 11.3  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.3                |      |       |       |       |     |       | 3.3       | .0       |          | 4.1        | 2.7   | 4.0   | 3.2   | 2.9   | 2.8   | 2.2   | 3.0   |
| TOT OBS  | 746                | 3247 | 3186  | 784   | 55    | 0   | 8018  |           | 11.8     |          | 1554       | 75    | 1681  | 711   | 1510  | 107   | 1581  | 799   |
| TOT PCT  | 9.3                | 40.5 | 39.7  | 9.8   | .7    | .0  | 100.0 |           |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 18    |
| N        | 5.0                | 12.0 | 5.6   | .6    | *   |           | 23.3     | 12.4     | 22.3       | 23.9  | 23.7  | 23.2  |
| NE       | 6.1                | 20.7 | 11.0  | 1.3   | *   |           | 39.2     | 13.4     | 41.3       | 38.9  | 37.5  | 39.2  |
| E        | 1.9                | 2.9  | 1.0   | .1    | .0  |           | 5.9      | 10.4     | 5.9        | 6.3   | 5.7   | 5.8   |
| SE       | .9                 | .6   | .2    | .0    | .0  |           | 1.7      | 7.9      | 1.2        | 1.7   | 2.8   | 1.4   |
| S        | 1.3                | .9   | .4    | *     | .0  |           | 2.6      | 9.4      | 2.1        | 2.1   | 3.6   | 2.9   |
| SW       | 2.0                | 2.6  | 1.0   | .1    | *   |           | 5.8      | 10.6     | 5.2        | 5.2   | 6.3   | 6.4   |
| W        | 2.4                | 3.9  | 1.5   | .3    | *   |           | 8.1      | 11.5     | 7.8        | 8.4   | 7.9   | 8.2   |
| NW       | 2.6                | 5.3  | 1.9   | .3    | *   |           | 10.1     | 11.5     | 10.3       | 9.7   | 9.6   | 10.5  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 3.3                |      |       |       |     |           | 3.3      | .0       | 4.1        | 3.8   | 2.9   | 2.5   |
| TOT OBS  | 2041               | 3933 | 1814  | 222   | 8   | 8018      |          | 11.8     | 1629       | 2392  | 1617  | 2380  |
| TOT PCT  | 25.5               | 49.1 | 22.6  | 2.8   | .1  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |  | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|--|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |  |     |       |          |           |
| 00003 | 4.1  | 6.0 | 41.6 | 39.4               | 8.6   | .3    |  | .0  | 11.5  | 100.0    | 1629      |
| 06009 | 3.8  | 6.0 | 40.6 | 39.0               | 9.9   | .7    |  | .0  | 11.8  | 100.0    | 2392      |
| 12015 | 2.9  | 6.1 | 40.1 | 40.5               | 9.7   | .7    |  | .0  | 11.9  | 100.0    | 1617      |
| 18021 | 2.5  | 6.1 | 39.9 | 40.1               | 10.5  | .9    |  | .0  | 12.1  | 100.0    | 2380      |
| TOT   | 262  | 484 | 3247 | 3186               | 784   | 55    |  | 0   | 11.8  |          | 8018      |
| PCT   | 3.3  | 6.0 | 40.5 | 39.7               | 9.8   | .7    |  | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 10.2 | 6.2  | 8.2  | 1.7          |              | 3.6                    |
| NE       | 15.7 | 7.8  | 10.4 | 3.5          |              | 3.5                    |
| E        | 2.1  | .7   | 1.0  | .3           |              | 3.0                    |
| SE       | .5   | .3   | .4   | .1           |              | 3.5                    |
| S        | 1.2  | .3   | .5   | .3           |              | 3.1                    |
| SW       | 2.7  | 1.5  | .8   | .4           |              | 2.8                    |
| W        | 4.1  | 2.4  | 2.1  | .5           |              | 3.2                    |
| NW       | 4.0  | 3.2  | 2.8  | .9           |              | 3.6                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.8  | .6   | .9   | .2           |              | 2.8                    |
| TOT OBS  | 1341 | 729  | 859  | 247          | 3176         |                        |
| TOT PCT  | 42.2 | 23.0 | 27.0 | 7.8          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | *          | .1         | .7         | 3.0          | 2.5          | .9           | .3           | *            | .2    | 18.5               |              |
| NE      | .0         | *          | .1         | 1.1        | 4.0          | 3.1          | 1.7          | .4           | .2           | .4    | 26.4               |              |
| E       | *          | .0         | .0         | .1         | .3           | .2           | .1           | .1           | *            | .2    | 3.0                |              |
| SE      | .0         | .0         | .0         | *          | .1           | *            | *            | .0           | .0           | *     | 1.1                |              |
| S       | .0         | .0         | .0         | *          | .2           | .1           | .2           | .0           | .0           | .0    | 1.8                |              |
| SW      | .0         | .0         | .1         | .1         | .4           | .3           | .1           | *            | .0           | .0    | 4.4                |              |
| W       | .0         | .0         | .1         | .4         | .6           | .4           | .1           | .0           | .0           | .0    | 7.4                |              |
| NW      | .0         | .0         | *          | .2         | 1.0          | 1.0          | .4           | .1           | .0           | .1    | 8.1                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .1         | .2           | .2           | .1           | .1           | .0           | *     | 2.7                |              |
| TOT OBS | 2          | 2          | 12         | 86         | 310          | 250          | 113          | 29           | 9            | 33    | 2330               | 3176         |
| TOT PCT | .1         | .1         | .4         | 2.7        | 9.8          | 7.9          | 3.6          | .9           | .3           | 1.0   | 73.4               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | # OR<br>>10 | # OR<br>>5 | # OR<br>>2 | # OR<br>>1 | # OR<br>>1/2 | # OR<br>>1/4 | # OR<br>>50YD | # OR<br>>0 |
| # OR >6500        | 1.2         | 1.4        | 1.4        | 1.4        | 1.4          | 1.4          | 1.4           | 1.4        |
| # OR >5000        | 1.9         | 2.3        | 2.3        | 2.3        | 2.3          | 2.3          | 2.3           | 2.3        |
| # OR >3500        | 4.6         | 5.8        | 5.9        | 5.9        | 5.9          | 5.9          | 5.9           | 5.9        |
| # OR >2000        | 10.5        | 13.3       | 13.6       | 13.6       | 13.6         | 13.6         | 13.6          | 13.6       |
| # OR >1000        | 19.0        | 22.7       | 23.1       | 23.1       | 23.1         | 23.1         | 23.1          | 23.1       |
| # OR >600         | 21.1        | 25.3       | 25.7       | 25.8       | 25.8         | 25.8         | 25.8          | 25.8       |
| # OR >300         | 21.4        | 25.6       | 26.1       | 26.1       | 26.1         | 26.1         | 26.1          | 26.1       |
| # OR >150         | 21.4        | 25.6       | 26.1       | 26.2       | 26.2         | 26.2         | 26.2          | 26.2       |
| # OR >0           | 21.4        | 25.6       | 26.2       | 26.3       | 26.3         | 26.3         | 26.3          | 26.3       |
| TOTAL             | 704         | 842        | 860        | 862        | 862          | 862          | 862           | 862        |

TOTAL NUMBER OF OBS: 3283

PCT FREQ NH <5/8: 73.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|-----|-----|-----|-------|--------------|
|  | 20.4 | 15.8 | 15.4 | 13.0 | 8.6 | 6.9 | 6.8 | 7.1 | 6.1 | .1    | 3510         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | *    | .0  | .0   | *     |              |
|              | NO PCP | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %  | .0   | *    | .0  | .0  | .0  | .0  | .0  | *    | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .3   | .1  | .1  | *   | *   | .0  | .1   | .0  | .0   | .7    |              |
|              | TOT %  | .1   | .3   | .1  | .1  | *   | *   | .0  | .1   | .0  | .0   | .7    |              |
| 1<2          | PCP    | .0   | *    | .0  | .0  | .0  | .0  | *   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .1   | .0  | .0  | *   | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | TOT %  | .0   | .1   | .0  | .0  | *   | .0  | .0  | .0   | .0  | .0   | .1    |              |
| 2<5          | PCP    | .0   | *    | *   | .0  | .0  | .0  | *   | *    | .0  | .0   | .1    |              |
|              | NO PCP | .3   | .4   | .1  | .1  | .1  | .0  | .0  | .1   | .0  | .1   | 1.0   |              |
|              | TOT %  | .3   | .4   | .2  | .1  | .1  | .0  | *   | .1   | .0  | .1   | 1.1   |              |
| 5<10         | PCP    | .2   | .1   | .1  | *   | .1  | .1  | .2  | .1   | .0  | *    | .9    |              |
|              | NO PCP | 3.6  | 6.3  | .7  | .5  | .6  | 1.2 | 1.6 | 2.1  | .0  | .4   | 16.9  |              |
|              | TOT %  | 3.8  | 6.4  | .9  | .5  | .6  | 1.3 | 1.8 | 2.2  | .0  | .4   | 17.8  |              |
| 10+          | PCP    | .2   | .1   | .0  | *   | .0  | .1  | .1  | .2   | .0  | *    | .7    |              |
|              | NO PCP | 21.5 | 29.5 | 3.0 | 1.0 | 1.8 | 4.3 | 7.2 | 8.4  | .0  | 2.8  | 79.4  |              |
|              | TOT %  | 21.7 | 29.6 | 3.0 | 1.0 | 1.8 | 4.3 | 7.3 | 8.5  | .0  | 2.8  | 80.2  |              |
| TOT OBS      |        | 3926 |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |        | 25.9 | 36.8 | 4.1 | 1.6 | 2.5 | 5.6 | 9.2 | 10.9 | .0  | 3.3  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | *    | .0  | .0  | .0  | .0  | .0  | *    | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .0   | *    | .0  | .0  | .0  | .0  | .0  | *    | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | *    | *    | *   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | 4-10       | *    | .0   | *   | .1  | *   | .0  | .0  | *    | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .1   | .1  | .0  | .0  | *   | .0  | *    | .0  | .0   | .2    |              |
|              | 22+        | *    | .1   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .2   | .1  | .1  | *   | *   | .0  | .1   | .0  | .0   | .5    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0   | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0  | .0  | *   | .0  | *   | *    | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | *    | .0  | .0  | .0  | *   | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %      | *    | .1   | .0  | .0  | *   | .1  | *   | *    | .0  | .0   | .2    |              |
| 2<5          | 0-3        | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0   | .0  | .1   | .2    |              |
|              | 4-10       | .2   | .3   | .1  | .0  | .0  | *   | *   | *    | .0  | .0   | .6    |              |
|              | 11-21      | .1   | .2   | .1  | *   | *   | *   | *   | .1   | .0  | .0   | .5    |              |
|              | 22+        | *    | .1   | *   | .0  | .1  | *   | .0  | *    | .0  | .0   | .2    |              |
|              | TOT %      | .3   | .5   | .1  | *   | .1  | .1  | .1  | .1   | .0  | .1   | 1.5   |              |
| 5<10         | 0-3        | .1   | .2   | .1  | .1  | .1  | .1  | .2  | .1   | .0  | .4   | 1.4   |              |
|              | 4-10       | 1.1  | 1.7  | .3  | .2  | .2  | .6  | .7  | .9   | .0  | .0   | 5.7   |              |
|              | 11-21      | 1.8  | 3.2  | .4  | .1  | .2  | .4  | .6  | .7   | .0  | .0   | 7.3   |              |
|              | 22+        | .4   | .9   | .1  | *   | *   | .1  | .2  | .2   | .0  | .0   | 1.9   |              |
|              | TOT %      | 3.3  | 6.0  | .8  | .4  | .5  | 1.2 | 1.6 | 1.9  | .0  | .4   | 16.2  |              |
| 10+          | 0-3        | 1.2  | 1.3  | .5  | .1  | .3  | .5  | .4  | .4   | .0  | 2.8  | 7.5   |              |
|              | 4-10       | 8.5  | 11.6 | 2.4 | .7  | .8  | 2.2 | 3.5 | 4.2  | .0  | .0   | 34.0  |              |
|              | 11-21      | 9.5  | 14.8 | .8  | .2  | .6  | 1.1 | 2.4 | 3.2  | .0  | .0   | 32.6  |              |
|              | 22+        | 1.9  | 3.5  | .2  | *   | .1  | .4  | .6  | .8   | .0  | .0   | 7.5   |              |
|              | TOT %      | 21.1 | 31.1 | 3.9 | 1.1 | 1.9 | 4.3 | 7.0 | 8.5  | .0  | 2.8  | 81.6  |              |
| TOT OBS      |            | 5607 |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |            | 24.8 | 37.9 | 4.9 | 1.6 | 2.5 | 5.6 | 8.7 | 10.6 | .0  | 3.3  | 100.0 |              |



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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003          | .1         | .1         | .3         | 2.7        | 7.4          | 6.6          | 2.6          | 1.2          | .5           | .5    | 22.0  | 78.0                | 774          |
| 06009          | .0         | .0         | .7         | 3.6        | 12.8         | 7.4          | 3.9          | .7           | .1           | 1.1   | 30.4  | 69.6                | 812          |
| 12015          | .1         | .1         | .2         | 2.2        | 9.1          | 8.3          | 4.1          | .7           | .1           | 1.4   | 26.4  | 73.6                | 951          |
| 18021          | .0         | .0         | .2         | 1.9        | 7.5          | 7.2          | 2.9          | .8           | .4           | 1.2   | 22.1  | 77.9                | 895          |
| TOT            | 2          | 2          | 12         | 88         | 315          | 254          | 117          | 79           | 10           | 37    | 866   | 2566                | 3432         |
| PCT            | .1         | .1         | .3         | 2.6        | 9.2          | 7.4          | 3.4          | .8           | .3           | 1.1   | 25.2  | 74.8                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .2   | .5    | .2  | 1.9 | 15.4 | 81.8 | 1231         |
| 06009          | .0   | .7    | .2  | .8  | 19.4 | 78.9 | 1609         |
| 12015          | .0   | .2    | .1  | 1.2 | 14.8 | 83.6 | 1362         |
| 18021          | .0   | .7    | .3  | 1.9 | 15.8 | 81.3 | 1597         |
| TOT            | 2    | 31    | 11  | 85  | 956  | 4714 | 5799         |
| PCT            | *    | .5    | .2  | 1.5 | 16.5 | 81.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|--------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .1           | .7         | 4.5         | 19.3            | 76.2               | 730          |
| 06009          | .0           | .8         | 5.6         | 27.5            | 66.9               | 765          |
| 12015          | .1           | .4         | 3.8         | 24.2            | 72.0               | 919          |
| 18021          | .0           | .2         | 3.9         | 19.8            | 76.3               | 869          |
| TOT            | 2            | 17         | 145         | 745             | 2393               | 3283         |
| PCT            | .1           | .5         | 4.4         | 22.7            | 72.9               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .1    | .1    | .1    | .0    | .1    | .0     | 11           | .4          |
| 70/74  | .0   | .0    | .0    | .3    | 1.1   | 2.2   | 1.1   | .3     | 150          | 5.0         |
| 65/69  | .0   | .0    | .1    | 1.8   | 8.2   | 15.7  | 14.7  | 5.1    | 1356         | 45.6        |
| 60/64  | .0   | .0    | .1    | 3.7   | 11.2  | 16.5  | 11.5  | 4.9    | 1423         | 47.8        |
| 55/59  | .0   | .0    | .0    | .1    | .2    | .4    | .3    | .1     | 32           | 1.1         |
| 50/54  | .0   | .0    | .0    | .0    | .0    | *     | *     | .0     | 2            | .1          |
| TOTAL  | 0    | 0     | 7     | 174   | 618   | 1035  | 828   | 312    | 2974         | 100.0       |
| PCT    | .0   | .0    | .2    | 5.9   | 20.8  | 34.8  | 27.8  | 10.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|------|-----|------|
| .1   | .1   | .0  | .0  | .0  | *   | .1  | *    | .0  | .0   |
| 1.0  | 1.5  | .4  | .2  | .3  | .4  | .8  | .4   | .0  | .1   |
| 10.1 | 15.4 | 1.7 | .9  | 1.3 | 3.3 | 5.6 | 5.5  | .0  | 1.7  |
| 14.2 | 20.4 | 1.8 | .4  | .7  | 1.3 | 2.9 | 5.1  | .0  | .9   |
| .5   | .1   | *   | .0  | .0  | .1  | .1  | .2   | .0  | .1   |
| *    | .0   | .0  | .0  | .0  | .0  | *   | .0   | .0  | .0   |
| 25.9 | 37.6 | 4.0 | 1.5 | 2.3 | 5.2 | 9.5 | 11.3 | .0  | 2.8  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 72  | 69  | 67  | 63  | 60 | 58 | 52  | 63.5 | 1672         |
| 06009          | 76  | 70  | 68  | 63  | 59 | 56 | 50  | 63.3 | 2397         |
| 12015          | 81  | 75  | 72  | 66  | 62 | 57 | 50  | 66.5 | 1611         |
| 18021          | 81  | 74  | 71  | 65  | 61 | 59 | 50  | 65.5 | 2369         |
| TOT            | 81  | 73  | 70  | 64  | 60 | 57 | 50  | 64.6 | 8049         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 3.6   | 17.2  | 34.2  | 32.2  | 12.9   | 78   | 723          |
| 06009          | .0   | 3.6   | 16.0  | 33.5  | 32.5  | 14.4   | 78   | 808          |
| 12015          | .0   | 9.6   | 28.4  | 35.0  | 20.8  | 6.1    | 73   | 802          |
| 18021          | .0   | 6.6   | 21.2  | 36.1  | 26.3  | 9.8    | 75   | 787          |
| TOT            | 0    | 184   | 648   | 1083  | 870   | 335    | 76   | 3120         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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TABLE 17

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .1       | *        | 5     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .1       | *        | .2       | .2       | .0       | 19    | .0       | .5        |
| 7/8                | .0       | .0       | .0       | .1       | .2       | .6       | .4       | *        | 47    | *        | 1.2       |
| 6                  | .0       | .0       | .0       | *        | .2       | .3       | .1       | .0       | 22    | *        | .6        |
| 5                  | .0       | .0       | .0       | .1       | .6       | .8       | .2       | .0       | 63    | *        | 1.6       |
| 4                  | .0       | .0       | .0       | .2       | 1.3      | 1.3      | .1       | .0       | 109   | .1       | 2.8       |
| 3                  | .0       | .0       | .0       | .4       | 1.9      | 1.5      | .1       | .0       | 145   | .1       | 3.8       |
| 2                  | .0       | .0       | .0       | 1.2      | 4.2      | 1.5      | .0       | .0       | 259   | .1       | 6.8       |
| 1                  | .0       | .0       | .0       | 1.7      | 6.4      | 1.2      | .1       | .0       | 353   | .2       | 9.2       |
| 0                  | .0       | .0       | .1       | 5.5      | 9.5      | 1.1      | .1       | .0       | 615   | .3       | 16.0      |
| -1                 | .0       | .0       | .1       | 10.0     | 7.5      | .6       | .1       | .0       | 688   | .3       | 18.0      |
| -2                 | .0       | .0       | .3       | 10.3     | 4.4      | .3       | .0       | .0       | 575   | .2       | 15.0      |
| -3                 | .0       | .0       | .6       | 6.5      | 2.2      | .1       | .0       | .0       | 357   | .1       | 9.4       |
| -4                 | .0       | *        | .9       | 3.9      | .9       | *        | .0       | .0       | 215   | .1       | 5.6       |
| -5                 | .0       | .0       | .9       | 2.4      | .5       | *        | .0       | .0       | 144   | .1       | 3.8       |
| -6                 | .0       | *        | .4       | .9       | .2       | .0       | .0       | .0       | 58    | *        | 1.5       |
| -7/-8              | .0       | .2       | .3       | .6       | .1       | .0       | .0       | .0       | 45    | *        | 1.1       |
| -9/-10             | .0       | .3       | .1       | .2       | .1       | .0       | .0       | .0       | 25    | *        | .6        |
| -11/-13            | .2       | .2       | .1       | .1       | .0       | .0       | .0       | .0       | 20    | .0       | .5        |
| -14/-16            | .1       | .0       | .0       | .1       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| -17/-19            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| TOTAL              | 12       |          | 138      |          | 1513     |          | 51       |          | 3771  |          | 3707      |
| PCT                | .3       | .29      | 3.7      | 16.72    | 40.1     | 354      | 1.4      | .1       | 100.0 | 1.7      | 98.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .5  | 1.4  | .2    | .0    | .0    | .0  | 2.1  | .6  | 1.8  | .2    | .0    | .0    | .0  | 2.5  |
| 1-2     | .4  | 4.4  | 2.6   | .0    | .0    | .0  | 7.4  | .2  | 6.0  | 3.5   | .0    | .0    | .0  | 9.7  |
| 3-4     | .0  | 2.0  | 6.4   | .4    | .0    | .0  | 8.8  | .0  | 3.5  | 8.2   | .4    | .0    | .0  | 12.1 |
| 5-6     | .0  | .7   | 3.8   | .6    | .0    | .0  | 5.1  | .0  | .8   | 5.0   | 1.6   | .0    | .0  | 7.4  |
| 7       | .0  | .2   | 1.3   | .8    | .0    | .0  | 2.2  | *   | .2   | 2.4   | 1.3   | .0    | .0  | 4.0  |
| 8-9     | .0  | .0   | .5    | .2    | .0    | .0  | .7   | .0  | .1   | 1.0   | .4    | *     | .0  | 1.4  |
| 10-11   | .0  | .0   | .2    | .4    | .0    | .0  | .6   | .0  | .0   | .2    | .4    | *     | .0  | .6   |
| 12      | .0  | .0   | .3    | *     | .0    | .0  | .3   | .0  | .0   | *     | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .9  | 8.7  | 15.3  | 2.3   | *     | .0  | 27.2 | .8  | 12.3 | 20.4  | 4.4   | .2    | .0  | 38.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .3   | .0    | .0    | .0    | .0  | .3  | .2  | .2   | *     | .0    | .0    | .0  | .4  |
| 1-2     | .2  | 1.3  | .5    | .0    | .0    | .0  | 2.0 | .0  | .5   | .1    | .0    | .0    | .0  | .6  |
| 3-4     | .0  | .7   | .4    | .0    | .0    | .0  | 1.1 | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .2   | .2    | .2    | .0    | .0  | .6  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |
| 7       | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | .0   | .1    | *     | .0    | .0  | .1  |
| 8-9     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 2.5  | 1.3   | .2    | .0    | .0  | 4.2 | .2  | .7   | .4    | *     | .0    | .0  | 1.3 |

PERIOD: (OVER-ALL) 1963-1973

MARCH

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .2  | .4   | .0    | .0    | .0    | .0  |  | .6  | .4  | .3   | *     | .0    | .0    | .0  |  | .7  |
| 1-2     | *   | .3   | .2    | .0    | .0    | .0  |  | .6  | .0  | 1.1  | .4    | .0    | .0    | .0  |  | 1.5 |
| 3-4     | .0  | .1   | .2    | .1    | .0    | .0  |  | .5  | .0  | .7   | .5    | *     | .0    | .0  |  | 1.3 |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  |  | .2  | .0  | .1   | .3    | .1    | .0    | .0  |  | .6  |
| 7       | .0  | .0   | .0    | .1    | .0    | .0  |  | .1  | .0  | .0   | .1    | .1    | .0    | .0  |  | .2  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  |  | .1  | .0  | .0   | .1    | .1    | .0    | .0  |  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .1    | .0    | .0  |  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | *     | .1    | .0    | .0  |  | .1  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | *     | .0    | .0  |  | *   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .2  | .8   | .6    | .3    | .0    | .0  |  | 2.0 | .4  | 2.3  | 1.5   | .6    | .0    | .0  |  | 4.7 |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |           |
| <1      | .4  | 1.1  | *     | .0    | .0    | .0  |  | 1.5 | .2  | .9   | .1    | .0    | .0    | .0  |  | 1.1  |           |
| 1-2     | .1  | 2.0  | .6    | .0    | .0    | .0  |  | 2.7 | .1  | 2.5  | 1.2   | .0    | .0    | .0  |  | 3.7  |           |
| 3-4     | .0  | .9   | 1.4   | .2    | .0    | .0  |  | 2.4 | .0  | 1.3  | 1.1   | .1    | .0    | .0  |  | 2.5  |           |
| 5-6     | .0  | .3   | .6    | .2    | *     | .0  |  | 1.2 | .0  | .2   | 1.0   | .2    | .0    | .0  |  | 1.4  |           |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  |  | .4  | .0  | .1   | .4    | .2    | .0    | .0  |  | .7   |           |
| 8-9     | .0  | .0   | .1    | *     | .0    | .0  |  | .2  | .0  | *    | .4    | .2    | .0    | .0  |  | .6   |           |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  |  | .1  | .0  | *    | .1    | .1    | .0    | .0  |  | .2   |           |
| 12      | .0  | .0   | .0    | *     | .0    | .0  |  | *   | .0  | .0   | .1    | .0    | .0    | .0  |  | .1   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | *     | .0    | .0  |  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| TOT PCT | .5  | 4.3  | 3.0   | .6    | *     | .0  |  | 8.5 | .3  | 5.0  | 4.4   | .8    | .0    | .0  |  | 10.4 | 96.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.9 | 6.5  | .6    | .0    | .0    | .0  | 13.9  |         |
| 1-2     | 1.2 | 17.0 | 8.9   | .0    | .0    | .0  | 28.0  |         |
| 3-4     | .0  | 9.0  | 17.9  | 1.2   | .0    | .0  | 28.2  |         |
| 5-6     | .0  | 2.3  | 11.1  | 2.9   | *     | .0  | 16.3  |         |
| 7       | *   | .5   | 4.5   | 2.7   | .0    | .0  | 7.7   |         |
| 8-9     | .0  | .1   | 2.2   | .9    | *     | .0  | 3.3   |         |
| 10-11   | .0  | *    | .5    | 1.0   | *     | .0  | 1.5   |         |
| 12      | .0  | .0   | .5    | .2    | .0    | .0  | .7    |         |
| 13-16   | .0  | .0   | *     | .2    | .1    | .0  | .3    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.2 | 36.3 | 46.2  | 9.1   | .2    | .0  | 100.0 | 2166    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | 1.7 | 9.4  | 10.9 | 5.9  | 2.9  | .8  | .5    | .3  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 862         | 4 |
| 6-7             | *   | 1.1  | 4.1  | 7.1  | 3.2  | 2.2 | 1.5   | .5  | .5    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 545         | 6 |
| 8-9             | .0  | .4   | 2.2  | 3.2  | 3.0  | 2.3 | 1.4   | .5  | .4    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 355         | 7 |
| 10-11           | .0  | .5   | .7   | 1.3  | 1.4  | 1.0 | .7    | .4  | .3    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 166         | 7 |
| 12-13           | .0  | .0   | 1.0  | .7   | .7   | .5  | .5    | .2  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 97          | 7 |
| >13             | .0  | .0   | .0   | .5   | .3   | .3  | .2    | .1  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 38          | 8 |
| INDET           | 4.3 | 4.0  | 4.9  | 4.0  | 2.9  | 1.4 | .6    | .1  | .1    | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 595         | 4 |
| TOTAL           | 160 | 407  | 634  | 601  | 383  | 227 | 140   | 53  | 38    | 12    | 2     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2658        | 5 |
| PCT             | 6.0 | 15.3 | 23.9 | 22.6 | 14.4 | 8.5 | 5.3   | 2.0 | 1.4   | .5    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

APRIL

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TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FGD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| N        | .1                 | .6        | .2   | .0        | .0   | .0              | .0   | .9                      | .6             | .2        | 1.2      | .0                  | 1.1        | .0              | 96.1       |
| NE       | .3                 | .3        | .3   | .0        | .0   | .0              | .0   | .9                      | .6             | .6        | 1.7      | .0                  | 1.6        | .3              | 95.0       |
| E        | 1.9                | .5        | .0   | .0        | .0   | .0              | .0   | 2.3                     | .0             | .9        | 1.9      | .0                  | 1.9        | .0              | 93.0       |
| SE       | 5.0                | .0        | .0   | .0        | .0   | .0              | .0   | 5.0                     | .0             | .0        | 12.5     | .0                  | 2.5        | .0              | 80.0       |
| S        | 1.6                | .8        | 1.2  | .0        | .0   | .0              | .0   | 3.6                     | 1.6            | .0        | 2.4      | .0                  | .8         | 1.6             | 89.9       |
| SW       | 3.4                | 2.8       | .3   | .0        | .0   | .0              | .0   | 6.5                     | .0             | 1.1       | .0       | .0                  | .0         | .0              | 93.5       |
| W        | .9                 | 2.4       | 1.3  | .0        | .0   | .0              | .0   | 4.5                     | 1.9            | .0        | .0       | .0                  | .0         | .0              | 93.6       |
| NW       | 1.6                | 1.8       | 1.1  | .0        | .0   | .0              | .0   | 4.2                     | 2.8            | .3        | .6       | .0                  | .0         | .0              | 92.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 2.4      | .0                  | .0         | .0              | 97.6       |
| TOT PCT  | .5                 | .7        | .4   | .0        | .0   | .0              | .0   | 1.5                     | .8             | .2        | 1.4      | .0                  | 1.1        | .1              | 94.9       |
| TOT OBS: | 3829               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FGD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| 00003      | .6                 | .8        | .2   | .0        | .0   | .0              | .0   | 1.6                     | 1.0            | .6        | .8       | .0                  | .8         | .1              | 95.3       |
| 06009      | .8                 | 1.1       | .8   | .0        | .0   | .0              | .0   | 2.5                     | 1.4            | .1        | 1.6      | .0                  | 1.2        | .0              | 93.2       |
| 12015      | .2                 | .7        | .1   | .0        | .0   | .0              | .0   | 1.0                     | .6             | .0        | 1.0      | .0                  | 1.0        | .2              | 96.2       |
| 18021      | .6                 | .3        | .4   | .0*       | .0   | .0              | .0   | 1.2                     | .1             | .0        | 1.8      | .0                  | 1.4        | .2              | 95.3       |
| TOT PCT    | .5                 | .7        | .4   | .0        | .0   | .0              | .0   | 1.6                     | .8             | .2        | 1.3      | .0                  | 1.1        | .1              | 95.0       |
| TOT OBS:   | 3948               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.1                | 13.0 | 15.2  | 3.0   | .1    | .0  |      | 32.4      | 12.7     |          | 33.3       | 39.9  | 33.2  | 27.5  | 32.7  | 32.7  | 34.7  | 27.4  |
| NE       | .9                 | 12.8 | 21.9  | 5.4   | .3    | .0  |      | 41.4      | 14.2     |          | 40.7       | 42.4  | 42.8  | 43.4  | 40.5  | 48.0  | 39.8  | 42.0  |
| E        | .4                 | 2.2  | 1.4   | .3    | .0    | .0  |      | 4.3       | 10.6     |          | 4.1        | 2.1   | 3.6   | 5.6   | 4.7   | 2.7   | 3.6   | 5.7   |
| SE       | .2                 | .4   | .1    | .0    | .0    | .0  |      | .8        | 5.8      |          | .8         | .0    | .6    | 1.1   | .8    | .5    | .7    | .9    |
| S        | .3                 | .8   | .4    | .1    | .0    | .0  |      | 1.5       | 9.1      |          | 1.2        | .0    | 1.1   | 1.7   | 2.3   | 3.5   | 1.7   | 1.0   |
| SW       | .3                 | 1.4  | 1.0   | .3    | .0    | .0  |      | 3.0       | 11.2     |          | 3.1        | 2.4   | 2.1   | 3.2   | 3.3   | 3.0   | 3.6   | 2.6   |
| W        | .5                 | 2.6  | 1.9   | .4    | .0    | .0  |      | 5.4       | 10.9     |          | 5.8        | 1.8   | 4.9   | 5.4   | 5.0   | 3.7   | 5.2   | 6.9   |
| NW       | .5                 | 4.7  | 3.2   | .7    | .0    | .0  |      | 9.2       | 11.3     |          | 8.4        | 8.8   | 9.2   | 10.1  | 8.7   | 5.9   | 9.0   | 11.4  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.2                |      |       |       |       |     |      | 2.2       | .0       |          | 2.6        | 2.4   | 2.5   | 2.0   | 2.2   | .0    | 1.7   | 2.0   |
| TOT OBS  | 494                | 2915 | 3492  | 789   | 40    | 0   | 7730 | 12.6      |          |          | 1529       | 82    | 1561  | 702   | 1472  | 101   | 1502  | 781   |
| TOT PCT  | 6.4                | 37.7 | 43.2  | 10.2  | .5    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|----|------|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |      |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 5.2                | 18.5 | 8.0   | .7    | .0 |      | 32.4      | 12.7     |          | 33.6       | 31.5  | 32.7  | 32.2  |    |
| NE       | 4.9                | 21.2 | 13.5  | 1.7   | .0 |      | 41.4      | 14.2     |          | 40.8       | 43.0  | 41.0  | 40.6  |    |
| E        | 1.3                | 2.2  | .7    | .1    | .0 |      | 4.3       | 10.6     |          | 4.0        | 4.2   | 4.5   | 4.3   |    |
| SE       | .6                 | .2   | .0    | .0    | .0 |      | .8        | 5.8      |          | .7         | .8    | .7    | .8    |    |
| S        | .7                 | .6   | .2    | .0    | .0 |      | 1.5       | 9.1      |          | 1.2        | 1.3   | 2.4   | 1.5   |    |
| SW       | .9                 | 1.4  | .6    | .1    | .0 |      | 3.0       | 11.2     |          | 3.1        | 2.4   | 3.3   | 3.3   |    |
| W        | 1.6                | 2.6  | 1.0   | .1    | .0 |      | 5.4       | 10.9     |          | 5.6        | 5.0   | 4.9   | 5.8   |    |
| NW       | 2.3                | 5.1  | 1.6   | .2    | .0 |      | 9.2       | 11.3     |          | 8.4        | 9.5   | 8.5   | 9.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0 |      | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 2.2                |      |       |       |    |      | 2.2       | .0       |          | 2.5        | 2.3   | 2.0   | 1.8   |    |
| TOT OBS  | 1514               | 4000 | 1984  | 227   | 3  | 7730 | 12.6      |          |          | 1611       | 2263  | 1573  | 2283  |    |
| TOT PCT  | 19.6               | 51.7 | 25.7  | 2.9   | .0 |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

APRIL

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28.0N 15.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+   | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-------|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |       |       |          |           |
| 00003 | 2.5  | 3.9 | 37.9 | 44.7               | 10.5  | .5    | .0 | 12.6  | 100.0 | 1611     |           |
| 00009 | 2.3  | 4.1 | 38.2 | 44.8               | 10.1  | .5    | .0 | 12.4  | 100.0 | 2263     |           |
| 12015 | 2.0  | 4.7 | 36.5 | 45.5               | 10.6  | .8    | .0 | 12.8  | 100.0 | 1573     |           |
| 18021 | 1.8  | 4.2 | 38.0 | 45.7               | 9.9   | .4    | .0 | 12.6  | 100.0 | 2283     |           |
| TOT   | 167  | 327 | 2915 | 3492               | 789   | 40    | 0  | 12.6  |       | 7730     |           |
| PCT   | 2.2  | 4.2 | 37.7 | 45.2               | 10.2  | .5    | .0 | 100.0 |       |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 13.4 | 9.6  | 13.0 | 5.0          |              | 4.0                    |
| NE       | 14.7 | 8.1  | 11.3 | 4.3          |              | 3.7                    |
| E        | .6   | .6   | .7   | .3           |              | 4.2                    |
| SE       | .3   | *    | *    | *            |              | 2.3                    |
| S        | .6   | .6   | .3   | .1           |              | 3.5                    |
| SW       | 1.0  | .6   | .2   | .2           |              | 3.0                    |
| W        | 1.9  | 1.0  | .8   | .3           |              | 2.9                    |
| NW       | 3.0  | 2.0  | 2.2  | .5           |              | 3.5                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.4  | .3   | .6   | .2           |              | 2.9                    |
| TOT OBS  | 1142 | 708  | 896  | 336          | 3082         | 3.8                    |
| TOT PCT  | 37.1 | 23.0 | 29.1 | 10.9         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| WIND DIR | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+<br>ANY HGT | NH <5/8<br>TOTAL<br>OBS |
|----------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------------------|
|          |            |            |            |            |              |              |              |              |              |                  |                         |
| N        | .1         | *          | .1         | 1.6        | 5.0          | 4.9          | 1.9          | .4           | .1           | .4               | 26.6                    |
| NE       | *          | *          | *          | 1.2        | 4.8          | 3.7          | 1.9          | .4           | .1           | .3               | 26.0                    |
| E        | .0         | .0         | .0         | .2         | .2           | .1           | .1           | .1           | .0           | .0               | 1.5                     |
| SE       | .0         | .0         | .0         | .0         | .0           | *            | *            | .0           | .0           | .0               | .3                      |
| S        | .0         | .0         | .0         | *          | .1           | .1           | *            | .0           | *            | .0               | 1.3                     |
| SW       | .0         | .0         | .0         | *          | .2           | *            | *            | .0           | .0           | .0               | 1.7                     |
| W        | .0         | .0         | .0         | .1         | .4           | .1           | .1           | *            | .0           | *                | 3.2                     |
| NW       | .0         | .0         | .0         | .2         | .9           | .4           | .3           | *            | .1           | *                | 5.8                     |
| VAR      | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0               | .0                      |
| CALM     | .0         | .0         | .0         | *          | .3           | .2           | .1           | *            | .0           | *                | 1.8                     |
| TOT OBS  | 3          | 2          | 5          | 104        | 366          | 299          | 135          | 30           | 8            | 24               | 2106                    |
| TOT PCT  | .1         | .1         | .2         | 3.4        | 11.9         | 9.7          | 4.4          | 1.0          | .3           | .8               | 68.3                    |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >OR >6500         | .8        | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  |
| >OR >5000         | 1.5       | 1.9  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  |
| >OR >3500         | 5.1       | 6.2  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3   | 6.3  |
| >OR >2000         | 13.7      | 15.8 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1  | 16.1 |
| >OR >1000         | 24.1      | 27.3 | 27.7 | 27.8 | 27.8 | 27.8 | 27.8  | 27.8 |
| >OR >600          | 26.9      | 30.6 | 31.0 | 31.1 | 31.1 | 31.1 | 31.1  | 31.1 |
| >OR >300          | 27.0      | 30.7 | 31.2 | 31.2 | 31.3 | 31.3 | 31.3  | 31.3 |
| >OR >150          | 27.0      | 30.8 | 31.3 | 31.3 | 31.3 | 31.4 | 31.4  | 31.4 |
| >OR >0            | 27.1      | 30.8 | 31.3 | 31.4 | 31.4 | 31.4 | 31.4  | 31.5 |
| TOTAL             | 850       | 968  | 984  | 985  | 986  | 987  | 987   | 988  |

TOTAL NUMBER OF OBS: 3141

PCT FREQ NH <5/8: 68.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | 8 OBSCD | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|-----|---------|--------------|
| 16.8 | 14.1 | 15.0 | 12.8 | 9.5 | 6.5 | 7.5 | 8.4 | 9.3 | .1      | 3348         |

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28.0N 15.1W

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | N      | NE   | E    | SE  | S  | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|-----|------|------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0   | .0   |              |
|              | NO PCP | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0   | .1   |              |
|              | TOT %  | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0   | .1   |              |
| 1/2<1        | PCP    | *    | *    | .0  | .0 | .1  | *   | .0  | .0  | .0   | .1   |              |
|              | NO PCP | .2   | .4   | .1  | .1 | *   | .0  | *   | .0  | .0   | .7   |              |
|              | TOT %  | .2   | .4   | .1  | .1 | *   | .1  | *   | .0  | .0   | .9   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | *   | .0  | .0  | .0  | .0   | *    |              |
|              | NO PCP | .1   | .2   | *   | *  | *   | .0  | .0  | .0  | .0   | .4   |              |
|              | TOT %  | .1   | .2   | *   | *  | *   | .0  | .0  | .0  | .0   | .4   |              |
| 2<5          | PCP    | .0   | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0   | .1   |              |
|              | NO PCP | .4   | .3   | .0  | .0 | *   | .0  | *   | .1  | .0   | .8   |              |
|              | TOT %  | .4   | .4   | .0  | .0 | *   | *   | .1  | .0  | .1   | .9   |              |
| 5<10         | PCP    | .2   | .2   | *   | *  | .1  | .1  | .3  | .0  | .0   | .9   |              |
|              | NO PCP | 6.6  | 7.3  | .6  | .2 | .2  | .6  | .7  | 1.7 | .0   | 18.3 |              |
|              | TOT %  | 6.9  | 7.4  | .6  | .2 | .3  | .7  | .8  | 1.9 | .0   | 3.3  | 19.2         |
| 10+          | PCP    | .1   | .1   | .1  | .0 | .0  | .1  | .1  | .0  | .0   | .4   |              |
|              | NO PCP | 32.0 | 29.9 | 2.0 | .2 | 1.3 | 1.6 | 3.2 | 6.2 | 1.8  | 78.1 |              |
|              | TOT %  | 32.1 | 30.0 | 2.1 | .2 | 1.3 | 1.6 | 3.3 | 6.3 | 1.8  | 78.6 |              |
| TOT OBS      |        |      |      |     |    |     |     |     |     |      |      | 3821         |
| TOT PCT      |        |      |      |     |    |     |     |     |     |      |      | 100.0        |

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>UBS |
|--------------|------------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | * *  | *    | .0  | .0 | .0  | .0  | .0  | *   | .0  |      | .1    |              |
|              | 11-21      | .0   | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  |      | *     |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  |      | .0    |              |
|              | TOT %      | *    | .1   | .0  | .0 | .0  | .0  | .0  | *   | .0  | .0   | .1    |              |
| 1/2<         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | .1   | .1   | *   | *  | *   | *   | *   | *   | .0  | *    | .3    |              |
|              | 11-21      | .1   | .2   | *   | *  | *   | .0  | .0  | .0  | .0  |      | .3    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  |      | .0    |              |
|              | TOT %      | .2   | .3   | *   | *  | *   | *   | *   | *   | .0  | *    | .6    |              |
| 1<           | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .0  | *  | *   | .0  | .0  | *   | .0  |      | .1    |              |
|              | 11-21      | *    | .1   | *   | .0 | *   | .0  | .0  | .0  | .0  |      | .1    |              |
|              | 22+        | *    | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  |      | .1    |              |
|              | TOT %      | .1   | .1   | *   | *  | *   | .0  | .0  | *   | .0  | .0   | .3    |              |
| 2<           | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | .2   | .2   | .0  | .0 | .0  | .0  | .0  | *   | .0  |      | .4    |              |
|              | 11-21      | .3   | .3   | *   | .0 | *   | .0  | *   | .1  | .0  |      | .7    |              |
|              | 22+        | .1   | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  |      | .2    |              |
|              | TOT %      | .5   | .6   | *   | *  | *   | .   | .   | .1  | .0  | *    | 1.3   |              |
| 5<           | 0-3        | .2   | .1   | .1  | *  | *   | *   | .1  | .1  | .0  | .3   | .9    |              |
|              | 4-10       | 1.6  | 1.8  | .4  | .1 | .1  | .3  | .4  | .7  | .0  |      | 5.3   |              |
|              | 11-21      | 3.2  | 4.2  | .2  | *  | .1  | .2  | .3  | .8  | .0  |      | 9.0   |              |
|              | 22+        | .7   | 1.2  | .1  | *  | *   | *   | .1  | .1  | .0  |      | 2.3   |              |
|              | TOT %      | 5.8  | 7.3  | .8  | .2 | .2  | .6  | .8  | 1.6 | .0  | .3   | 17.5  |              |
| 10+          | 0-3        | .8   | .6   | .2  | .1 | .2  | .2  | .4  | .4  | .0  | 1.9  | 4.8   |              |
|              | 4-10       | 12.0 | 9.4  | 1.6 | .2 | .7  | .8  | 2.3 | 4.2 | .0  |      | 31.2  |              |
|              | 11-21      | 13.8 | 16.7 | .8  | *  | .3  | .8  | 1.4 | 2.7 | .0  |      | 36.4  |              |
|              | 22+        | 2.8  | 3.9  | .7  | .0 | .2  | .2  | .6  | .0  | .0  |      | 7.8   |              |
|              | TOT %      | 29.4 | 30.5 | 2.7 | .4 | 1.2 | 1.9 | 4.3 | 7.9 | .0  | 1.9  | 80.2  |              |
| TOT DBS      |            |      |      |     |    |     |     |     |     |     |      |       |              |
| TOT PCT      |            | 36.0 | 38.8 | 3.5 | .6 | 1.5 | 2.5 | 5.1 | 9.6 | .0  | 2.3  | 100.0 | 5496         |



APRIL

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .3         | .0         | .3         | 2.3        | 11.1         | 9.8          | 3.3          | .9           | .4           | .9    | 29.3  | 70.7               | 748          |
| 06009         | .1         | .1         | .2         | 5.4        | 15.5         | 13.0         | 4.2          | 1.1          | .2           | .5    | 40.4  | 59.6               | 815          |
| 12015         | .0         | .0         | .0         | 2.6        | 9.9          | 9.5          | 5.2          | .9           | .2           | .7    | 29.0  | 71.0               | 887          |
| 18021         | .0         | .1         | .1         | 2.7        | 8.8          | 5.8          | 3.7          | .7           | .1           | .8    | 23.0  | 77.0               | 827          |
| TOT           | 3          | 2          | 5          | 106        | 370          | 311          | 136          | 90           | 8            | 24    | 995   | 2282               | 3277         |
| PCT           | .1         | .1         | .2         | 3.2        | 11.3         | 9.5          | 4.2          | .9           | .2           | .7    | 30.4  | 69.6               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .2    | .1  | 1.5 | 18.0 | 80.1 | 1215         |
| 06009         | .3   | .8    | .4  | 1.7 | 20.5 | 76.5 | 1550         |
| 12015         | .0   | .5    | .3  | .8  | 14.3 | 84.1 | 1299         |
| 18021         | .0   | 1.0   | .4  | 1.1 | 17.7 | 79.9 | 1551         |
| TOT           | 5    | 36    | 17  | 72  | 996  | 4489 | 5615         |
| PCT           | .1   | .6    | .3  | 1.3 | 17.7 | 79.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .3            | .6         | 4.5         | 27.0            | 68.5              | 712          |
| 06009         | .1            | .8         | 7.7         | 34.8            | 57.5              | 782          |
| 12015         | .0            | .0         | 3.4         | 27.1            | 69.4              | 844          |
| 18021         | .0            | .2         | 3.5         | 20.5            | 76.0              | 803          |
| TOT           | 3             | 12         | 149         | 858             | 2134              | 3141         |
| PCT           | .1            | .4         | 4.7         | 27.3            | 67.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | *     | .1    | .1    | .1    | .0    | .0    | *      | 11           | .4          |
| 70/74  | .0   | .0    | .1    | .6    | 1.9   | 1.8   | .7    | .3     | 151          | 5.3         |
| 65/69  | .0   | .0    | .1    | 2.8   | 11.6  | 17.8  | 11.5  | 3.8    | 1359         | 47.7        |
| 60/64  | .0   | .0    | .1    | 2.2   | 12.5  | 17.0  | 10.5  | 3.8    | 1311         | 46.0        |
| 55/59  | .0   | .0    | .0    | .0    | .2    | *     | .2    | .2     | 18           | .6          |
| TOTAL  | 0    | 1     | 10    | 163   | 750   | 1044  | 653   | 229    | 2850         | 100.0       |
| PCT    | .0   | *     | .4    | 5.7   | 26.3  | 36.6  | 22.9  | 8.0    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|-----|-----|-----|-----|-----|------|
| .1   | .2   | .1  | *  | .0  | .0  | .0  | .0  | .0  | .0   |
| 2.1  | 1.6  | .2  | *  | .2  | .2  | .3  | .3  | .0  | .2   |
| 16.7 | 21.9 | 1.4 | .3 | .8  | 1.2 | 1.9 | 2.8 | .0  | .7   |
| 20.6 | 16.1 | .9  | .1 | .5  | .5  | 1.6 | 5.0 | .0  | .7   |
| .2   | .1   | .0  | .0 | *   | *   | .1  | .2  | .0  | .0   |
| 39.8 | 40.0 | 2.5 | .4 | 1.6 | 1.9 | 3.9 | 8.3 | .0  | 1.7  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 74  | 69  | 67  | 64  | 61 | 58 | 53  | 63.8 | 1632         |
| 06009         | 77  | 70  | 68  | 64  | 60 | 59 | 52  | 63.8 | 2274         |
| 12015         | 80  | 76  | 73  | 67  | 63 | 61 | 54  | 67.2 | 1555         |
| 18021         | 85  | 75  | 72  | 66  | 62 | 60 | 53  | 66.1 | 2244         |
| TOT           | 85  | 74  | 71  | 65  | 61 | 59 | 52  | 65.1 | 7705         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.8   | 19.4  | 37.2  | 28.3  | 12.4   | 77   | 686          |
| 06009         | .0   | 3.8   | 23.6  | 36.6  | 26.6  | 9.4    | 76   | 759          |
| 12015         | .0   | 12.5  | 34.4  | 35.3  | 13.4  | 4.4    | 71   | 751          |
| 18021         | .0   | 4.7   | 28.0  | 37.8  | 23.3  | 6.1    | 74   | 724          |
| TOT           | 0    | 176   | 773   | 1072  | 666   | 233    | 74   | 2920         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

APRIL

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 2     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | .1       | .1       | .0       | .0       | 7     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .1       | .0       | .0       | 14    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .8       | .5       | .0       | .0       | .0       | 49    | .0       | 1.4       |
| 6                  | .0       | .0       | .0       | .0       | .1       | .5       | .2       | .0       | .0       | .0       | 27    | *        | .7        |
| 5                  | .0       | .0       | .0       | .1       | .7       | .9       | .1       | .0       | .0       | .0       | 66    | .0       | 1.9       |
| 4                  | .0       | .0       | .0       | .3       | 1.3      | 1.4      | .1       | .0       | .0       | .0       | 108   | .2       | 2.9       |
| 3                  | .0       | .0       | .0       | .2       | 1.9      | 1.4      | .0       | .0       | .0       | .0       | 123   | .1       | 3.4       |
| 2                  | .0       | .0       | *        | 1.0      | 4.5      | 1.4      | *        | .0       | .0       | .0       | 249   | .2       | 6.9       |
| 1                  | .0       | .0       | *        | 2.2      | 7.5      | 1.3      | .0       | .0       | .0       | .0       | 390   | .1       | 10.9      |
| 0                  | .0       | .0       | .1       | 6.5      | 10.8     | .6       | *        | .0       | .0       | .0       | 633   | .2       | 17.7      |
| -1                 | .0       | .0       | *        | 10.4     | 8.4      | .2       | *        | .0       | .0       | .0       | 675   | .4       | 18.7      |
| -2                 | .0       | .0       | .3       | 10.0     | 4.8      | .1       | .0       | .0       | .0       | .0       | 598   | .1       | 15.1      |
| -3                 | .0       | .0       | .5       | 5.7      | 1.5      | *        | .0       | .0       | .0       | .0       | 273   | .1       | 7.7       |
| -4                 | .0       | .0       | .4       | 3.7      | .8       | .0       | .0       | .0       | .0       | .0       | 172   | .1       | 4.8       |
| -5                 | .0       | *        | .5       | 2.2      | .4       | *        | .0       | .0       | .0       | .0       | 110   | *        | 3.1       |
| -6                 | .0       | .0       | .4       | .5       | .2       | .0       | .0       | .0       | .0       | .0       | 39    | .0       | 1.1       |
| -7/-8              | .0       | .1       | .2       | .4       | .2       | *        | .0       | .0       | .0       | .0       | 31    | *        | .9        |
| -9/-10             | .0       | .1       | .1       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 7     | .0       | .2        |
| -11/-13            | *        | .2       | *        | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 10    | .0       | .3        |
| -14/-16            | .0       | *        | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| TOTAL              | 1        |          | 91       |          | 1529     |          | 43       |          | 1        |          | 3526  | 53       | 3473      |
| PCT                | *        | .3       | 2.6      | 43.3     | 43.4     | 8.8      | 1.2      | .2       | *        | *        | 100.0 | 1.5      | 98.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| N       |     |      |       |       |       |     |      |     |      |       |       |       |     |      |
| <1      | .6  | 1.9  | .2    | .0    | .0    | .0  | 2.7  | .1  | .6   | .2    | .0    | .0    | .0  | .9   |
| 1-2     | .3  | 7.2  | 4.0   | .0    | .0    | .0  | 11.5 | .1  | 4.4  | 2.9   | .0    | .0    | .0  | 7.4  |
| 3-4     | *   | 3.4  | 8.0   | .7    | .0    | .0  | 12.1 | .0  | 2.7  | 8.0   | .6    | .0    | .0  | 11.3 |
| 5-6     | .0  | 1.4  | 7.3   | 1.3   | .0    | .0  | 10.1 | .0  | .6   | 6.9   | 1.6   | .0    | .0  | 9.1  |
| 7       | .0  | *    | 2.6   | .8    | *     | .0  | 3.5  | .0  | .2   | 3.3   | 1.3   | .1    | .0  | 4.9  |
| 8-9     | .0  | .0   | .9    | 1.1   | .0    | .0  | 2.0  | .0  | *    | 1.6   | 1.3   | *     | .0  | 2.9  |
| 10-11   | .0  | .0   | .3    | *     | .0    | .0  | .7   | .0  | *    | .4    | .9    | .1    | .0  | 1.4  |
| 12      | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | .1    | .2    | .1    | .0  | .4   |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0   | *     | .2    | .1    | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .9  | 14.0 | 23.4  | 4.5   | .1    | .0  | 42.8 | .2  | 8.5  | 23.4  | 6.0   | .5    | .0  | 38.6 |
| E       |     |      |       |       |       |     |      |     |      |       |       |       |     |      |
| <1      | *   | .2   | *     | .0    | .0    | .0  | .3   | .0  | .2   | .0    | .0    | .0    | .0  | .2   |
| 1-2     | .1  | .3   | .1    | .0    | .0    | .0  | .5   | *   | .1   | .0    | .0    | .0    | .0  | .1   |
| 3-4     | .0  | .3   | .1    | *     | .0    | .0  | .5   | .0  | *    | .0    | .0    | .0    | .0  | *    |
| 5-6     | .0  | .1   | .0    | .0    | .0    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .1  | .8   | .6    | .1    | .0    | .0  | 1.6  | *   | .2   | .0    | .0    | .0    | .0  | .3   |
| SE      |     |      |       |       |       |     |      |     |      |       |       |       |     |      |
| <1      | .0  | .2   | .0    | .0    | .0    | .0  | .3   | .0  | .2   | .0    | .0    | .0    | .0  | .2   |
| 1-2     | .1  | .3   | .1    | .0    | .0    | .0  | .5   | .0  | .1   | .0    | .0    | .0    | .0  | .1   |
| 3-4     | .0  | .3   | .1    | *     | .0    | .0  | .5   | .0  | *    | .0    | .0    | .0    | .0  | *    |
| 5-6     | .0  | .1   | .0    | .0    | .0    | .0  | .2   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .1  | .8   | .6    | .1    | .0    | .0  | 1.6  | *   | .2   | .0    | .0    | .0    | .0  | .3   |

PERIOD: (OVER-ALL) 1963-1973

APRIL

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28.0N 15.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .1  | .4   | .2    | .0    | .0    | .0  | .7  | .1  | .2   | .2    | .0    | .0    | .0  | .5  |
| 3-4     | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .7   | .3    | .1    | .0    | .0  | 1.2 | .1  | .3   | .8    | .1    | .0    | .0  | 1.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .3   | .0    | .0    | .0    | .0  | .4  | .2  | .6   | .0    | .0    | .0    | .0  | .8  |           |
| 1-2     | .1  | 1.2  | .3    | .0    | .0    | .0  | 1.5 | .2  | 1.9  | .3    | .0    | .0    | .0  | 2.4 |           |
| 3-4     | .0  | .3   | .3    | .0    | .0    | .0  | .6  | .0  | .8   | 1.4   | .2    | .0    | .0  | 2.4 |           |
| 5-6     | .0  | .0   | .4    | .1    | .0    | .0  | .5  | .0  | .3   | 1.1   | .2    | .0    | .0  | 1.6 |           |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .3  | .0  | .0   | .2    | .1    | .0    | .0  | .3  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .2    | .0    | .0  | .2  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .2    | .0    | .0  | .2  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | 1.7  | 1.3   | .1    | .0    | .0  | 3.3 | .4  | 3.6  | 3.1   | 1.0   | .0    | .0  | 9.1 | 97.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.3 | 3.9  | .4    | .0    | .0    | .0  | 8.6   |         |
| 1-2     | 1.1 | 15.7 | 8.1   | .0    | .0    | .0  | 24.8  |         |
| 3-4     | .1  | 7.6  | 17.8  | 1.6   | .0    | .0  | 27.2  |         |
| 5-6     | .0  | 2.3  | 15.9  | 3.3   | .0    | .0  | 21.5  |         |
| 7       | .0  | .2   | 6.4   | 2.3   | .1    | .0  | 9.1   |         |
| 8-9     | .0  | .0   | 2.6   | 2.5   | .0    | .0  | 5.3   |         |
| 10-11   | .0  | .0   | .7    | 1.3   | .1    | .0  | 2.1   |         |
| 12      | .0  | .0   | .1    | .3    | .1    | .0  | .5    |         |
| 13-16   | .0  | .0   | .0    | .0    | .4    | .0  | .6    |         |
| 17-19   | .0  | .0   | .1    | .0    | .0    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.5 | 29.9 | 52.3  | 11.8  | .6    | .0  | 100.0 | 2057    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 1.1 | 6.2  | 10.2 | 6.4  | 4.3  | 1.1 | .5    | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 756   | 4        |
| 6-7          | .0  | .8   | 4.4  | 7.5  | 5.3  | 2.7 | 1.5   | .6  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 578   | 6        |
| 8-9          | .0  | .4   | 2.2  | 4.3  | 4.0  | 3.1 | 1.0   | .4  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 397   | 6        |
| 10-11        | .0  | .4   | .7   | 1.0  | 1.2  | .8  | .6    | .3  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 134   | 7        |
| 12-13        | .0  | .0   | .8   | .5   | .2   | .2  | .2    | .1  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 66    | 7        |
| >13          | .0  | .0   | .0   | .2   | .2   | .2  | .2    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 29    | 9        |
| INDET        | 2.1 | 3.7  | 4.2  | 4.5  | 3.2  | 1.4 | 1.3   | .4  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 523   | 5        |
| TOTAL        | 80  | 287  | 562  | 608  | 457  | 240 | 135   | 56  | 47    | 10    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2483  | 5        |
| PCT          | 3.2 | 11.6 | 22.6 | 24.5 | 18.4 | 9.7 | 5.4   | 2.3 | 1.9   | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

MAY

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28.0N 15.2W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR      | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|---------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|               | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WO PCPN | FOG WO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N             | .1                 | .4        | .1   | .0        | .0   | .0              | .0   | .7                      | .3             | .1        | 1.1         | *                   | 1.6        | .0              | 96.1       |
| NE            | .1                 | .3        | .2   | .0        | .0   | .0              | .0   | .6                      | .3             | .0        | 1.4         | .0                  | 2.4        | .3              | 95.0       |
| E             | .0                 | 1.3       | .0   | .0        | .0   | .0              | .0   | 1.3                     | .0             | .6        | .0          | .0                  | 3.1        | .0              | 95.0       |
| SE            | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 1.6       | 3.2         | .0                  | 3.2        | .0              | 91.9       |
| S             | .0                 | 1.4       | .0   | .0        | .0   | .0              | .0   | 1.4                     | 2.8            | 1.4       | .0          | .0                  | .0         | .0              | 94.4       |
| SW            | .9                 | 2.3       | .0   | .0        | .0   | .0              | .0   | 3.2                     | .9             | .0        | .5          | .0                  | .0         | .0              | 95.4       |
| W             | .0                 | 1.7       | .0   | .0        | .0   | .0              | .0   | 1.7                     | .6             | .0        | 2.1         | .0                  | 1.7        | .0              | 93.9       |
| NW            | .0                 | .8        | .0   | .0        | .0   | .0              | .0   | .8                      | 1.3            | 1.0       | 1.4         | .1                  | 2.0        | .0              | 93.4       |
| VAR           | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM          | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 4.9         | .0                  | 1.6        | .0              | 93.4       |
| TOT PCT       | .1                 | .5        | .1   | .0        | .0   | .0              | .0   | .8                      | .5             | .2        | 1.3         | *                   | 1.9        | .1              | 95.2       |
| TOT OBS: 3938 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT)    | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|---------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|               | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WO PCPN | FOG WO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 0003          | .1                 | .5        | .0   | .0        | .0   | .0              | .0   | .7                      | .3             | .2        | 1.1         | .0                  | 1.0        | .2              | 96.5       |
| 0609          | .2                 | .6        | .3   | .0        | .0   | .0              | .0   | 1.1                     | .6             | .4        | 1.6         | .0                  | 1.1        | .0              | 95.3       |
| 12015         | .0                 | .3        | .0   | .0        | .0   | .0              | .0   | .3                      | .6             | .0        | 1.2         | .0                  | 2.4        | .0              | 95.5       |
| 18021         | .2                 | .6        | .2   | .0        | .0   | .0              | .0   | .9                      | .3             | .1        | 1.7         | .1                  | 3.0        | .3              | 93.6       |
| TOT PCT       | .1                 | .5        | .1   | .0        | .0   | .0              | .0   | .7                      | .4             | .2        | 1.4         | *                   | 1.9        | .1              | 95.2       |
| TOT OBS: 4030 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21    |       |
| N        | 1.3                | 12.5 | 16.8  | 3.6   | .2    | .0 |      | 34.4  | 13.2      |          | 34.4     | 46.2       | 36.1  | 30.1  | 34.7  | 37.4  | 35.4  | 31.4  |
| NE       | .9                 | 13.6 | 21.8  | 5.3   | .3    | .0 |      | 42.0  | 14.1      |          | 43.5     | 37.0       | 40.3  | 44.1  | 39.8  | 42.3  | 41.6  | 45.5  |
| E        | .3                 | 1.8  | 1.2   | .2    | *     | .0 |      | 3.5   | 10.6      |          | 3.6      | 1.9        | 2.9   | 4.3   | 3.6   | .9    | 3.2   | 4.9   |
| SE       | .2                 | .6   | .1    | *     | .0    | .0 |      | .9    | 6.9       |          | .9       | .3         | 1.0   | 1.3   | 1.3   | .9    | .4    | 1.2   |
| S        | .2                 | .7   | .4    | *     | .0    | .0 |      | 1.3   | 8.3       |          | 1.2      | 3.0        | 1.5   | 1.5   | 1.8   | .0    | 1.3   | .4    |
| SW       | .3                 | 1.3  | .6    | *     | .0    | .0 |      | 2.4   | 8.9       |          | 2.1      | 4.3        | 2.2   | 1.8   | 2.8   | 2.6   | 2.1   | 3.0   |
| W        | .6                 | 2.4  | 1.2   | .1    | .0    | .0 |      | 4.4   | 9.2       |          | 3.7      | 1.1        | 4.0   | 4.6   | 4.4   | 5.6   | 5.4   | 4.7   |
| NW       | .6                 | 5.3  | 2.7   | .3    | *     | .0 |      | 9.0   | 9.6       |          | 8.6      | 3.0        | 9.6   | 9.9   | 9.3   | 10.5  | 9.3   | 6.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |       |    |      | 2.0   | .0        |          | 2.0      | 3.3        | 2.4   | 2.4   | 2.4   | .0    | 1.3   | 2.0   |
| TOT OBS  | 537                | 3082 | 3614  | 782   | 48    | 0  | 8063 |       | 12.5      |          | 1600     | 92         | 1591  | 776   | 1527  | 117   | 1514  | 846   |
| TOT PCT  | 6.7                | 38.2 | 44.8  | 9.7   | .6    | .0 |      | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 5.6                | 18.3 | 9.6   | .9    | *   |           | 34.4     | 13.2     | 35.0       | 34.1  | 34.9  | 34.0  |    |
| NE       | 5.0                | 22.0 | 13.3  | 1.7   | *   |           | 42.0     | 14.1     | 43.1       | 41.6  | 40.0  | 43.0  |    |
| E        | 1.2                | 1.7  | .6    | .1    | .0  |           | 3.5      | 10.6     | 3.5        | 3.4   | 3.4   | 3.8   |    |
| SE       | .6                 | .3   | .1    | *     | .0  |           | .8       | 6.9      | .8         | 1.1   | 1.2   | .7    |    |
| S        | .7                 | .5   | .1    | *     | .0  |           | 1.3      | 8.3      | 1.3        | 1.5   | 1.7   | 1.0   |    |
| SW       | 1.0                | 1.1  | .2    | *     | .0  |           | 2.4      | 8.9      | 2.3        | 2.1   | 2.8   | 2.5   |    |
| W        | 1.6                | 2.3  | .5    | *     | .0  |           | 4.4      | 9.2      | 3.6        | 4.2   | 4.5   | 5.2   |    |
| NW       | 3.0                | 4.9  | 1.0   | *     | .0  |           | 9.0      | 9.6      | 8.3        | 9.7   | 9.4   | 8.4   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.0                |      |       |       |     |           | 2.0      | .0       | 2.1        | 2.4   | 2.2   | 1.5   |    |
| TOT OBS  | 1670               | 4114 | 2052  | 221   | 6   | 8063      |          | 12.5     | 1692       | 2367  | 1644  | 2360  |    |
| TOT PCT  | 20.7               | 51.0 | 25.4  | 2.7   | .1  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1921-1973  
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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 0000 | 2.1  | 3.7 | 39.1 | 45.7               | 9.0   | .5    | .0  | 12.5  | 100.0    | 1692      |
| 0600 | 2.4  | 5.2 | 39.0 | 44.1               | 8.7   | .6    | .0  | 12.1  | 100.0    | 2367      |
| 1200 | 2.2  | 5.8 | 34.1 | 46.7               | 10.5  | .6    | .0  | 12.7  | 100.0    | 1644      |
| 1800 | 1.5  | 3.9 | 39.7 | 43.6               | 10.6  | .5    | .0  | 12.7  | 100.0    | 2360      |
| TOT  | 164  | 373 | 3082 | 3614               | 782   | 48    | 0   | 12.5  |          | 8063      |
| PCT  | 2.0  | 4.6 | 38.2 | 44.8               | 9.7   | .6    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
|          |      |      |      |            |              |                        |
| N        | 13.2 | 8.7  | 13.6 | 6.3        |              | 4.2                    |
| NE       | 12.8 | 7.5  | 11.4 | 5.6        |              | 4.1                    |
| E        | .8   | .2   | .4   | .2         |              | 3.2                    |
| SE       | .3   | .1   | .1   | *          |              | 3.2                    |
| S        | .7   | .5   | .4   | .2         |              | 3.5                    |
| SW       | 1.3  | .5   | .8   | .2         |              | 3.4                    |
| W        | 1.8  | .9   | 1.1  | .3         |              | 3.2                    |
| NW       | 3.0  | 2.2  | 2.1  | 1.0        |              | 3.8                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | .7   | .4   | .5   | .2         |              | 3.4                    |
| TOT OBS  | 1060 | 646  | 933  | 425        | 3064         | 4.0                    |
| TOT PCT  | 34.6 | 21.1 | 30.5 | 13.9       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .0         | .2         | 2.3        | 6.0          | 5.1          | 2.1          | .5           | .2           | .4    | 25.0               |              |
| NE      | *          | .0         | .1         | 1.3        | 4.7          | 4.4          | 1.9          | .4           | .3           | .4    | 23.7               |              |
| E       | .0         | .0         | .0         | *          | .1           | .1           | .1           | *            | *            | .0    | 1.2                |              |
| SE      | .0         | .0         | .0         | .0         | *            | *            | .1           | *            | .0           | *     | .5                 |              |
| S       | .0         | .0         | .0         | .0         | .2           | .1           | .1           | *            | .0           | *     | 1.4                |              |
| SW      | .0         | .0         | .0         | .1         | .4           | .1           | .1           | .0           | .0           | .0    | 2.2                |              |
| W       | .0         | .0         | .0         | .1         | .4           | .3           | *            | *            | *            | *     | 3.1                |              |
| NW      | .0         | .0         | .1         | .4         | .8           | .6           | .3           | *            | *            | *     | 6.0                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | *          | *          | 2            | .2           | .1           | *            | .0           | *     | 1.3                |              |
| TOT OBS | 1          | 0          | 13         | 128        | 395          | 332          | 145          | 34           | 18           | 29    | 1969               | 3064         |
| TOT PCT | *          | .0         | .4         | 4.2        | 12.9         | 10.8         | 4.7          | 1.1          | .6           | .9    | 64.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.2       | 1.5  | 1.5  | 1.5  | 1.5  | 1.5  | 1.5   | 1.5  |
| >5000             | 2.1       | 2.6  | 2.6  | 2.6  | 2.6  | 2.6  | 2.6   | 2.6  |
| >3500             | 5.6       | 7.1  | 7.3  | 7.3  | 7.3  | 7.3  | 7.3   | 7.3  |
| >2000             | 13.7      | 17.6 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1  | 18.1 |
| >1000             | 23.9      | 30.4 | 31.0 | 31.0 | 31.0 | 31.0 | 31.0  | 31.0 |
| >600              | 27.4      | 34.6 | 35.3 | 35.3 | 35.3 | 35.3 | 35.3  | 35.3 |
| >300              | 27.6      | 35.0 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7  | 35.7 |
| >150              | 27.6      | 35.1 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7  | 35.7 |
| >0                | 27.7      | 35.1 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8  | 35.8 |
| TOTAL             | 899       | 1090 | 1111 | 1111 | 1111 | 1111 | 1111  | 1111 |

TOTAL NUMBER OF OBS: 3106

PCT FREQ NH <5/8: 64.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8    | OBS | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|-----|-----|------|-----|--------------|
|  | 15.5 | 13.5 | 15.3 | 10.7 | 8.7 | 7.4 | 7.7 | 9.0 | 12.2 | .0  | 3282         |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                  |
|--------------|--------|------|------|-----|----|-----|-----|-----|-----|-----|------|------|---|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | NO PCP | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | TOT %  | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | *   | .0  | .0  | .0   | *    |   |
|              | NO PCP | .1   | .2   | .0  | *  | .0  | .0  | .0  | .0  | .0  | .0   | .3   |   |
|              | TOT %  | .1   | .2   | .0  | *  | .0  | .0  | *   | .0  | .0  | .0   | .3   |   |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | NO PCP | .1   | .1   | *   | .0 | .0  | .0  | *   | .0  | .0  | *    | .2   |   |
|              | TOT %  | .1   | .1   | *   | .0 | .0  | .0  | *   | .0  | .0  | *    | .2   |   |
| 2<5          | PCP    | .0   | *    | .0  | .0 | .0  | *   | .0  | .0  | .0  | .0   | .1   |   |
|              | NO PCP | .7   | .5   | .0  | .0 | *   | *   | *   | .1  | .0  | .1   | 1.4  |   |
|              | TOT %  | .7   | .5   | .0  | .0 | *   | *   | *   | .1  | .0  | .1   | 1.4  |   |
| 5<10         | PCP    | .2   | .1   | *   | .0 | *   | *   | .1  | *   | .0  | .0   | .4   |   |
|              | NO PCP | 8.7  | 9.9  | .7  | .3 | .5  | .5  | 1.1 | 2.3 | .0  | .4   | 24.3 |   |
|              | TOT %  | 8.8  | 10.0 | .7  | .3 | .5  | .5  | 1.2 | 2.3 | .0  | .4   | 24.7 |   |
| 10+          | PCP    | .1   | .1   | .0  | .0 | .0  | *   | .0  | *   | .0  | .0   | .3   |   |
|              | NO PCP | 30.8 | 26.9 | 1.3 | .5 | 1.3 | 2.1 | 3.2 | 5.9 | .0  | 1.1  | 73.1 |   |
|              | TOT %  | 30.9 | 27.0 | 1.3 | .5 | 1.3 | 2.1 | 3.2 | 6.0 | .0  | 1.1  | 73.4 |   |
| TOT OBS      |        |      |      |     |    |     |     |     |     |     |      |      | 3927  |
| TOT PCT      |        |      |      |     |    |     |     |     |     |     |      |      | 40.5 37.7 2.0 .8 1.8 2.8 4.5 8.4 .0 1.6 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                  |
|--------------|------------|------|------|-----|----|-----|-----|-----|-----|-----|------|------|---|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | 4-10       | .0   | .0   | .0  | .0 | .0  | .0  | .0  | *   | .0  | .0   | *    |   |
|              | 11-21      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | TOT %      | .0   | .0   | .0  | .0 | .0  | .0  | .0  | *   | .0  | .0   | *    |   |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|              | 4-10       | .1   | *    | .0  | *  | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|              | 11-21      | *    | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | *   | .0  | .0  | .0   | *    |   |
|              | TOT %      | .1   | .1   | .0  | *  | .0  | .0  | *   | .0  | .0  | .0   | .2   |   |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *    |   |
|              | 4-10       | *    | *    | *   | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|              | 11-21      | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|              | 22+        | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
|              | TOT %      | .1   | .1   | *   | .0 | .0  | .0  | .0  | *   | .0  | *    | .2   |   |
| 2<5          | 0-3        | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .1   | .1   |   |
|              | 4-10       | .1   | .2   | *   | .0 | *   | *   | *   | *   | .0  | .4   | .8   |   |
|              | 11-21      | .4   | .2   | *   | .0 | *   | *   | *   | .1  | .0  | .1   | .1   |   |
|              | 22+        | .1   | .1   | .0  | .0 | .0  | .0  | .0  | *   | .0  | .1   | 1.4  |   |
|              | TOT %      | .6   | .5   | *   | .0 | *   | *   | *   | .1  | .0  | .1   | 1.4  |   |
| 5<10         | 0-3        | .4   | .2   | .1  | .1 | .1  | *   | .2  | .2  | .0  | .3   | 1.4  |   |
|              | 4-10       | 2.4  | 2.6  | .3  | .1 | .2  | .3  | .5  | 1.0 | .0  | .7   | 7.2  |   |
|              | 11-21      | 3.9  | 4.6  | .3  | .1 | .1  | .1  | .2  | .7  | .0  | .9   | 9.9  |   |
|              | 22+        | 1.2  | 1.6  | .1  | .0 | *   | *   | *   | .1  | .0  | .3   | 3.0  |   |
|              | TOT %      | 7.8  | 8.9  | .6  | .2 | .4  | .5  | .9  | 1.9 | .0  | .3   | 21.6 |   |
| 10+          | 0-3        | .9   | .7   | .2  | .1 | .2  | .2  | .4  | .3  | .0  | 1.4  | 4.3  |   |
|              | 4-10       | 10.1 | 9.6  | 1.1 | .4 | .5  | 1.1 | 1.9 | 4.1 | .0  | .0   | 28.8 |   |
|              | 11-21      | 15.1 | 16.7 | .6  | .1 | .3  | .5  | .9  | 1.8 | .0  | .0   | 36.0 |   |
|              | 22+        | 3.2  | 3.8  | .1  | *  | *   | *   | *   | .2  | .0  | .0   | 7.4  |   |
|              | TOT %      | 29.3 | 30.8 | 1.9 | .6 | 1.1 | 1.9 | 3.2 | 6.5 | .0  | 1.4  | 76.5 |   |
| TOT OBS      |            |      |      |     |    |     |     |     |     |     |      |      | 5664  |
| TOT PCT      |            |      |      |     |    |     |     |     |     |     |      |      | 37.9 40.4 2.5 .8 1.5 2.4 4.2 8.5 .0 1.8 100.0 |



PERIOD: (PRIMARY) 1921-1973  
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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL        | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|--------------------|---------------|
| 00003          | .0         | .0         | .7         | 2.8        | 10.5         | 8.9          | 4.0          | .6           | 1.0          | 1.1      | 29.5         | 70.5               | 722           |
| 06009          | .1         | .0         | .4         | 7.3        | 18.4         | 13.5         | 5.4          | 1.7          | .4           | 1.0      | 48.3         | 51.7               | 776           |
| 12015          | .0         | .1         | .5         | 3.3        | 12.8         | 9.1          | 5.3          | 1.3          | .3           | .6       | 33.2         | 66.8               | 876           |
| 18021          | .0         | .0         | .2         | 3.1        | 8.9          | 10.3         | 3.6          | .8           | .6           | 1.0      | 28.6         | 71.4               | 833           |
| TOT<br>PCT     | 1<br>*     | 1<br>*     | 14<br>4    | 132<br>4.1 | 405<br>12.6  | 335<br>10.4  | 147<br>4.6   | 35<br>1.1    | 18<br>.6     | 29<br>.9 | 1117<br>34.8 | 2090<br>65.2       | 3207<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2   | 1/2<1    | 1<2      | 2<5       | 5<10         | 10+          | TOTAL<br>OBS  |
|----------------|--------|----------|----------|-----------|--------------|--------------|---------------|
| 00003          | .0     | .2       | .2       | 1.8       | 18.6         | 79.1         | 1244          |
| 06009          | .1     | .4       | .1       | 1.3       | 24.2         | 74.0         | 1590          |
| 12015          | .0     | .2       | .2       | 1.2       | 20.0         | 78.4         | 1329          |
| 18021          | .0     | .3       | .3       | 1.6       | 23.0         | 74.9         | 1593          |
| TOT<br>PCT     | 1<br>* | 15<br>.3 | 11<br>.2 | 85<br>1.5 | 1248<br>21.7 | 4396<br>76.4 | 5756<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50 FT | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|----------------|------------|-------------|-----------------|-------------------|---------------|
| 00003          | .0             | .7         | 5.2         | 26.0            | 68.8              | 693           |
| 06009          | .1             | .5         | 9.9         | 40.7            | 49.3              | 756           |
| 12015          | .0             | .6         | 4.6         | 29.9            | 65.5              | 852           |
| 18021          | .0             | .2         | 5.5         | 24.8            | 69.7              | 805           |
| TOT<br>PCT     | 1<br>*         | 16<br>.5   | 194<br>6.2  | 943<br>30.4     | 1969<br>63.4      | 3106<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | .1    | .0    | .0    | .0     | 2            | .1          |
| 75/79  | .0   | .0    | .1    | .1    | .5    | .4    | .2    | .0     | 37           | 1.2         |
| 70/74  | .0   | .0    | .1    | .7    | 3.0   | 4.6   | 2.6   | .6     | 348          | 11.5        |
| 65/69  | .0   | .0    | .0    | 1.3   | 12.2  | 28.9  | 22.2  | 6.7    | 2158         | 71.3        |
| 60/64  | .0   | .0    | .0    | .3    | 2.5   | 5.0   | 5.1   | 2.9    | 477          | 15.8        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .1    | .0    | .0     | 3            | .1          |
| TOTAL  | 0    | 0     | 4     | 71    | 549   | 1178  | 914   | 309    | 3025         | 100.0       |
| PCT    | .0   | .0    | .1    | 2.3   | 18.1  | 38.9  | 30.2  | 10.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|-----|-----|-----|-----|-----|------|
| 80/84 | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   |
| 75/79 | .5   | .3   | .0  | .0 | .0  | .0  | .1  | .2  | .0  | .0   |
| 70/74 | 4.2  | 4.0  | .5  | .1 | .2  | .6  | .9  | 1.0 | .0  | .2   |
| 65/69 | 29.0 | 27.3 | 1.2 | .5 | 1.3 | 2.1 | 2.8 | 6.4 | .0  | .8   |
| 60/64 | 6.8  | 6.7  | .3  | .0 | .2  | .0  | .4  | 1.0 | .0  | .3   |
| 55/59 | .0   | .0   | .0  | .0 | .0  | .0  | .1  | .0  | .0  | .0   |
| TOTAL | 40.6 | 38.3 | 1.9 | .6 | 1.7 | 2.8 | 4.1 | 8.7 | .0  | 1.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 75  | 71  | 68  | 65  | 63 | 61 | 54  | 65.4 | 1702         |
| 06009          | 82  | 72  | 69  | 65  | 63 | 61 | 54  | 65.5 | 2358         |
| 12015          | 83  | 78  | 74  | 68  | 65 | 63 | 57  | 68.8 | 1621         |
| 18021          | 83  | 77  | 73  | 67  | 64 | 62 | 55  | 67.7 | 2332         |
| TOT            | 83  | 76  | 72  | 66  | 63 | 61 | 54  | 66.8 | 8013         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .8    | 11.5  | 35.1  | 37.3  | 15.2   | 80   | 723          |
| 06009          | .0   | 1.6   | 14.2  | 38.2  | 32.2  | 13.8   | 79   | 760          |
| 12015          | .0   | 4.9   | 28.0  | 39.0  | 22.0  | 6.0    | 74   | 794          |
| 18021          | .0   | 2.2   | 18.1  | 42.5  | 30.4  | 6.7    | 76   | 805          |
| TOT            | 0    | 75    | 559   | 1196  | 935   | 317    | 77   | 3082         |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

MAY

APCA 0004 CANARY ISLANDS  
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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | M<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .1       | *        | *        | *        | 6     | .0       | .2        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .1       | .2       | *        | 13    | .0       | .4        |
| 9/10               | .0       | .0       | .0       | *        | .0       | .2       | .1       | *        | 15    | *        | .4        |
| 7/8                | .0       | .0       | .0       | .2       | .3       | .5       | .1       | .1       | 41    | .1       | 1.1       |
| 6                  | .0       | .0       | .0       | .1       | .3       | .4       | .0       | .0       | 26    | .0       | .7        |
| 5                  | .0       | .0       | .1       | .4       | 1.3      | .8       | .0       | .0       | 93    | .0       | 2.5       |
| 4                  | .0       | .0       | .1       | 1.0      | 2.1      | .3       | .0       | .0       | 127   | .2       | 3.3       |
| 3                  | .0       | .0       | .1       | 1.8      | 2.5      | .4       | .0       | .0       | 175   | .3       | 4.6       |
| 2                  | .0       | .0       | .3       | 4.1      | 3.4      | .1       | *        | .0       | 291   | .1       | 7.8       |
| 1                  | .0       | .0       | .7       | 9.1      | 3.2      | .1       | .0       | .0       | 478   | .2       | 12.9      |
| 0                  | .0       | *        | 2.4      | 16.8     | 2.3      | .1       | .0       | .0       | 790   | .2       | 21.4      |
| -1                 | .0       | *        | 3.6      | 15.0     | .8       | .0       | *        | .0       | 708   | .3       | 19.1      |
| -2                 | .0       | *        | 4.1      | 8.0      | .3       | *        | .0       | .0       | 457   | .1       | 12.4      |
| -3                 | .0       | .0       | 2.4      | 3.7      | .2       | .0       | .0       | .0       | 228   | .1       | 6.1       |
| -4                 | .0       | .0       | 1.5      | 1.1      | *        | .0       | .0       | .0       | 99    | *        | 2.7       |
| -5                 | .0       | .1       | .8       | .3       | *        | .0       | .0       | .0       | 46    | .0       | 1.3       |
| -6                 | .0       | .1       | .2       | .3       | .0       | .0       | .0       | .0       | 21    | .0       | .6        |
| -7/-8              | *        | .1       | .4       | .2       | .0       | .0       | .0       | .0       | 26    | .0       | .7        |
| -9/-10             | .1       | .1       | .1       | .1       | .0       | .0       | .0       | .0       | 11    | .0       | .3        |
| -11/-13            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| -14/-16            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 5        |          | 613      |          | 615      |          | 17       |          | 3656  | 55       | 3601      |
| PCT                | .1       | .4       | 16.8     | 62.2     | 16.8     | 3.0      | .5       | .2       | 100.0 | 1.5      | 98.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 1.4  | *     | .0    | .0    | .0  | 2.1  | .3  | .8   | .1    | .0    | .0    | .0  | 1.3  |
| 1-2     | .3  | 5.8  | 3.4   | .0    | .0    | .0  | 9.6  | .2  | 4.0  | 2.8   | .0    | .0    | .0  | 7.1  |
| 3-4     | .0  | 2.5  | 8.0   | .5    | .0    | .0  | 10.9 | .0  | 2.8  | 8.0   | .5    | .0    | .0  | 11.3 |
| 5-6     | .0  | .6   | 6.3   | 1.3   | .0    | .0  | 8.2  | .0  | .5   | 6.5   | 1.3   | .0    | .0  | 8.3  |
| 7       | .0  | .1   | 3.4   | 1.5   | *     | .0  | 5.0  | *   | .1   | 4.1   | 1.9   | .1    | .0  | 6.2  |
| 8-9     | .0  | *    | .8    | 1.1   | .0    | .0  | 1.9  | .0  | *    | 1.0   | 1.6   | *     | .0  | 2.7  |
| 10-11   | .0  | .0   | .3    | .8    | .1    | .0  | 1.2  | .0  | .0   | .5    | .8    | .1    | .0  | 1.4  |
| 12      | .0  | .0   | .2    | .2    | .1    | .0  | .4   | .0  | .0   | .1    | .1    | *     | .0  | .7   |
| 13-16   | .0  | .0   | .0    | .3    | *     | .0  | .3   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | *     | *     | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.0 | 10.5 | 22.4  | 5.6   | .3    | .0  | 39.8 | .6  | 8.2  | 23.2  | 6.3   | .3    | .0  | 38.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .3  | *   | .1   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | *   | .3   | .2    | .0    | .0    | .0  | .5  | *   | .1   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0  | *    | .1    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | *    | .1    | .1    | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .6   | .6    | .2    | .0    | .0  | 1.6 | .1  | .3   | .2    | .0    | .0    | .0  | .6  |

PERIOD: (OVER-ALL) 1963-1973

MAY  
TABLE 18 (CONT)AREA 0004 CANARY ISLANDS  
28.0N 15.2W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .4   | .0    | .0    | .0    | .0  | .5  | .2  | .5   | .0    | .0    | .0    | .0  | .7  |
| 1-2     | .2  | .3   | .2    | .0    | .0    | .0  | .7  | .1  | .9   | .3    | .0    | .0    | .0  | 1.2 |
| 3-4     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | .3   | .4    | .0    | .0    | .0  | .6  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | *    | .2    | *     | .0    | .0  | .3  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | .8   | .7    | *     | .0    | .0  | 1.9 | .3  | 1.7  | 1.0   | .1    | .0    | .0  | 3.0 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .3  | .6   | .0    | .0    | .0    | .0  | .9  | .1  | .8   | .0    | .0    | .0    | .0  | 1.0 |           |
| 1-2     | .2  | 1.2  | .5    | .0    | .0    | .0  | 1.9 | *   | 2.5  | .7    | .0    | .0    | .0  | 3.2 |           |
| 3-4     | .0  | .5   | .7    | .0    | .0    | .0  | 1.2 | .0  | 1.2  | 1.3   | .1    | .0    | .0  | 2.5 |           |
| 5-6     | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | *    | .6    | *     | .0    | .0  | .7  |           |
| 7       | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | .2    | .1    | .0    | .0  | .4  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .5  | 2.3  | 1.6   | .0    | .0    | .0  | 4.4 | .2  | 4.6  | 2.9   | .2    | .0    | .0  | 7.9 | 97.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.4 | 4.9  | .2    | .0    | .0    | .0  | 9.5   |         |
| 1-2     | 1.4 | 15.1 | 8.1   | .0    | .0    | .0  | 24.5  |         |
| 3-4     | .0  | 7.3  | 18.8  | 1.0   | .0    | .0  | 27.1  |         |
| 5-6     | .0  | 1.3  | 14.2  | 2.7   | .0    | .0  | 18.2  |         |
| 7       | *   | .4   | 7.9   | 3.4   | .1    | .0  | 11.8  |         |
| 8-9     | .0  | .1   | 1.8   | 2.8   | *     | .0  | 4.8   |         |
| 10-11   | .0  | .0   | .9    | 1.7   | .2    | .0  | 2.8   |         |
| 12      | .0  | .0   | .3    | .3    | .1    | .0  | .7    |         |
| 13-16   | .0  | .0   | .0    | .4    | .1    | .0  | .5    |         |
| 17-19   | .0  | .0   | .0    | *     | .1    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.8 | 29.1 | 52.1  | 12.3  | .6    | .0  | 100.0 | 2123    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.5 | 8.5  | 10.8 | 7.4  | 3.7  | 1.4 | .5    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 858   | 4        |
| 6-7          | .0  | .8   | 5.3  | 6.2  | 5.4  | 2.5 | 1.7   | .3  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 569   | 6        |
| 8-9          | .0  | .2   | 2.1  | 3.2  | 2.8  | 2.4 | 1.3   | .5  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 329   | 7        |
| 10-11        | .0  | .6   | .8   | .5   | 1.2  | .8  | .4    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 116   | 6        |
| 12-13        | .0  | .0   | .8   | .3   | .4   | .5  | .5    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 69    | 7        |
| >13          | .0  | .0   | .0   | .3   | .1   | .0  | .0    | .1  | .0    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 16    | 8        |
| INDET        | 2.6 | 4.6  | 4.2  | 4.2  | 3.4  | 1.9 | .9    | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 563   | 4        |
| TOTAL        | 104 | 369  | 602  | 556  | 425  | 239 | 136   | 45  | 38    | 4     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2520  | 5        |
| PCT          | 4.1 | 14.6 | 23.9 | 22.1 | 16.9 | 9.5 | 5.4   | 1.8 | 1.5   | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0004 CANARY ISLANDS  
28.0N 15.2W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | ORZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FGD WD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .1   | .3        | .3   | .0        | .0   | .0              | .0   | .7              | .4             | .2                      | 3.4         | .0                  | 2.4        | .2                   | 92.7       |
| NE                 | .0   | .5        | .1   | .0        | .0   | .0              | .0   | .7              | .2             | .1                      | 2.4         | .0                  | 1.5        | .1                   | 95.0       |
| E                  | 1.6  | .0        | 1.2  | .0        | .0   | .0              | .0   | 2.9             | 1.2            | .0                      | 1.6         | .0                  | 1.2        | .0                   | 93.0       |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | 2.4            | .0                      | .0          | .0                  | .0         | .0                   | 97.6       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 2.4         | .0                  | 2.4        | .0                   | 95.2       |
| SW                 | 1.8  | .0        | .0   | .0        | .0   | .0              | .0   | 1.8             | .5             | .0                      | 4.1         | .0                  | 2.3        | .0                   | 91.4       |
| W                  | .0   | 1.8       | 2.0  | .0        | .0   | .0              | .0   | 3.8             | .8             | 1.0                     | .0          | .0                  | 1.0        | .0                   | 93.4       |
| NW                 | .0   | 1.1       | .7   | .0        | .0   | .0              | .0   | 1.8             | .0             | .0                      | 3.5         | .3                  | 1.6        | .0                   | 92.8       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 6.1         | .0                  | 6.1        | .0                   | 87.8       |
| TOT PCT            | .1   | .5        | .3   | .0        | .0   | .0              | .0   | .9              | .3             | .2                      | 3.0         | *                   | 2.0        | .1                   | 93.5       |
| TOT OBS:           | 3496 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                               |                          |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|-------------------------------|--------------------------|
|               | RAIN               | RAIN<br>SHWR | ORZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGD WD<br>PCPN | FGD WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG<br>SNOW | DUST<br>NO<br>SIG<br>WEA |
| 00003         | .1                 | .6           | .1   | .0           | .0   | .0                    | .0   | .8                      | .4                | .4           | 2.3            | .0                        | 1.1           | .1                            | 94.9                     |
| 06009         | .1                 | .5           | .7   | .0           | .0   | .0                    | .0   | 1.3                     | .8                | .3           | 3.1            | .1                        | 1.8           | .1                            | 92.4                     |
| 12015         | .1                 | .3           | .2   | .0           | .0   | .0                    | .0   | .7                      | .1                | .0           | 2.5            | .0                        | 2.2           | .2                            | 94.3                     |
| 18021         | .1                 | .3           | .2   | .0           | .0   | .0                    | .0   | .7                      | .1                | .0           | 4.4            | .0                        | 2.7           | .0                            | 92.1                     |
| TOT PCT       | .1                 | .4           | .3   | .0           | .0   | .0                    | .0   | .9                      | .4                | .2           | 3.1            | *                         | 2.0           | .1                            | 93.4                     |
| TOT OBS:      | 3598               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                               |                          |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.5                | 16.4 | 19.3  | 2.9   | .1    | .0  |      | 40.2      | 12.3     |          | 40.3       | 51.4  | 41.2  | 36.5  | 38.3  | 56.3  | 42.5  | 37.2  |
| NE       | .9                 | 14.0 | 23.1  | 5.5   | .3    | .0  |      | 43.7      | 14.1     |          | 44.5       | 34.0  | 42.5  | 46.1  | 44.4  | 33.4  | 42.0  | 46.6  |
| E        | .3                 | 1.4  | 1.2   | .2    | *     | .0  |      | 3.0       | 11.3     |          | 2.6        | 2.5   | 3.1   | 4.7   | 3.1   | .0    | 2.1   | 4.0   |
| SE       | .1                 | .3   | .1    | .0    | .0    | .0  |      | .4        | 7.1      |          | .2         | .0    | .3    | .4    | .5    | .0    | .3    | 1.1   |
| S        | .1                 | .3   | .2    | .0    | .0    | .0  |      | .5        | 8.5      |          | .5         | .0    | .3    | .1    | 1.3   | .0    | .6    | .1    |
| SW       | .4                 | .6   | .3    | *     | .0    | .0  |      | 1.4       | 8.0      |          | 1.7        | 1.1   | 1.4   | .8    | 1.7   | .0    | 1.3   | 1.2   |
| W        | .3                 | 1.6  | .4    | *     | .0    | .0  |      | 2.3       | 7.5      |          | 2.3        | 4.2   | 2.1   | 2.6   | 2.6   | 1.9   | 2.0   | 2.4   |
| NW       | .6                 | 4.5  | 1.9   | .2    | *     | .0  |      | 7.1       | 9.0      |          | 6.5        | 5.6   | 7.3   | 7.3   | 6.8   | 8.4   | 8.3   | 6.3   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.3                |      |       |       |       |     |      | 1.3       | .0       |          | 1.4        | 1.1   | 1.7   | 1.4   | 1.3   | .0    | .8    | 1.1   |
| TOT OBS  | 398                | 2848 | 3390  | 646   | 35    | 0   | 7317 |           | 12.4     |          | 1479       | 89    | 1480  | 692   | 1353  | 92    | 1327  | 805   |
| TOT PCT  | 5.4                | 38.9 | 46.3  | 8.8   | .5    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |    | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |          |
|----------|------|--------------------|-------|-------|----|------|--------------|-------------|-------------|------------|----------|----------|----------|
|          |      | 7-16               | 17-27 | 28-40 |    |      |              |             |             | 00<br>03   | 06<br>09 | 12<br>15 | 18<br>21 |
| N        | 7.1  | 23.3               | 9.0   | .8    | *  |      | 40.2         | 12.3        | 40.9        | 39.7       | 39.5     | 40.5     |          |
| NE       | 5.0  | 23.1               | 14.0  | 1.5   | .1 |      | 43.7         | 14.1        | 43.9        | 43.7       | 43.7     | 43.8     |          |
| E        | .8   | 1.6                | .6    | .1    | .0 |      | 3.0          | 11.3        | 2.6         | 3.6        | 2.9      | 2.8      |          |
| SE       | .2   | .2                 | *     | .0    | .0 |      | .4           | 7.1         | .2          | .3         | .4       | .6       |          |
| S        | .2   | .2                 | .1    | .0    | .0 |      | .5           | 8.5         | .5          | .2         | 1.2      | .4       |          |
| SW       | .7   | .4                 | .2    | .0    | .0 |      | 1.4          | 8.0         | 1.6         | 1.2        | 1.6      | 1.3      |          |
| W        | 1.2  | 1.0                | .1    | .0    | .0 |      | 2.3          | 7.5         | 2.4         | 2.3        | 2.5      | 2.1      |          |
| NW       | 2.6  | 4.0                | .5    | *     | .0 |      | 7.1          | 9.0         | 6.5         | 7.3        | 6.9      | 7.6      |          |
| VAR      | .0   | .0                 | .0    | .0    | .0 |      | .0           | .0          | .0          | .0         | .0       | .0       |          |
| CALM     | 1.3  |                    |       |       |    |      | 1.3          | .0          | 1.4         | 1.6        | 1.2      | .9       |          |
| TOT OBS  | 1401 | 3940               | 1793  | 175   | 8  | 7317 |              | 12.4        | 1568        | 2172       | 1445     | 2132     |          |
| TOT PCT  | 19.1 | 53.8               | 24.5  | 2.4   | .1 |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |          |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0004 CANARY ISLANDS  
28.0N 15.2W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 |      | 4-10 |     | WIND SPEED (KNOTS) |       |       | 48+   | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|------|-----|--------------------|-------|-------|-------|------|----------|-----------|
|       |      |     |      |      |     | 11-21              | 22-33 | 34-47 |       |      |          |           |
| 00003 | 1.4  | 3.6 | 41.0 | 44.0 | 9.3 | .7                 | .0    | 12.5  | 100.0 | 1568 |          |           |
| 06009 | 1.6  | 4.0 | 41.5 | 44.4 | 8.1 | .4                 | .0    | 12.1  | 100.0 | 2172 |          |           |
| 12015 | 1.2  | 4.4 | 35.4 | 49.4 | 9.1 | .3                 | .0    | 12.7  | 100.0 | 1445 |          |           |
| 18021 | .9   | 4.5 | 37.1 | 47.9 | 9.1 | .5                 | .0    | 12.6  | 100.0 | 2132 |          |           |
| TOT   | 95   | 303 | 2848 | 3390 | 646 | 35                 | 0     | 12.4  |       | 7317 |          |           |
| PCT   | 1.3  | 4.1 | 38.9 | 46.3 | 8.8 | .5                 | .0    | 100.0 |       |      |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
|          |      |      |      |            |              |                        |
| N        | 15.4 | 9.6  | 13.1 | 10.5       |              | 4.3                    |
| NE       | 12.7 | 6.3  | 9.0  | 6.4        |              | 4.0                    |
| E        | .4   | .2   | .4   | .4         |              | 4.4                    |
| SE       | .2   | *    | .1   | *          |              | 3.4                    |
| S        | .3   | .2   | .4   | .1         |              | 3.9                    |
| SW       | .7   | .4   | .3   | .1         |              | 3.5                    |
| W        | 1.1  | .7   | .8   | .2         |              | 3.5                    |
| NW       | 3.0  | 2.0  | 2.5  | .9         |              | 3.9                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | .8   | .1   | .5   | .2         |              | 3.0                    |
| TOT OBS  | 957  | 535  | 745  | 514        | 2751         | 4.1                    |
| TOT PCT  | 34.8 | 19.4 | 27.1 | 18.7       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|    | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| .1 | .1         | .3         | 2.9        | 8.1        | 5.9          | 2.5          | .7           | .4           | .4           | .4    | 27.3               |              |
| *  | .0         | .2         | 2.3        | 4.6        | 4.2          | 1.7          | .3           | .4           | .3           | .3    | 20.3               |              |
| .0 | .0         | .0         | .1         | .1         | .2           | .2           | .1           | .0           | .0           | .0    | .7                 |              |
| .0 | .0         | *          | .0         | .0         | *            | *            | .0           | .0           | .0           | .0    | .2                 |              |
| .0 | .0         | *          | .0         | .1         | .2           | .0           | .0           | .0           | *            | *     | .6                 |              |
| .0 | .0         | .0         | .0         | .1         | .1           | .1           | .0           | *            | *            | *     | 1.2                |              |
| .0 | .0         | .1         | .1         | .3         | .2           | .1           | .0           | .0           | .0           | .0    | 2.0                |              |
| *  | .0         | .0         | .4         | .8         | 1.0          | .3           | *            | *            | *            | *     | 5.9                |              |
| .0 | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| .0 | .0         | *          | .1         | *          | .2           | .1           | .0           | .0           | *            | .0    | 1.1                |              |
| 3  | 2          | 19         | 161        | 392        | 328          | 136          | 32           | 23           | 20           | 1635  | 2751               |              |
| .1 | .1         | .7         | 5.9        | 14.2       | 11.9         | 4.9          | 1.2          | .8           | .7           | 59.4  | 100.0              |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.1       | 1.6  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7   | 1.7  |
| >5000             | 2.1       | 2.8  | 2.9  | 2.9  | 2.9  | 2.9  | 2.9   | 2.9  |
| >3500             | 6.4       | 7.6  | 7.8  | 7.9  | 7.9  | 7.9  | 7.9   | 7.9  |
| >2000             | 15.6      | 19.2 | 19.6 | 19.6 | 19.7 | 19.7 | 19.7  | 19.7 |
| >1000             | 26.4      | 32.8 | 33.6 | 33.7 | 33.7 | 33.8 | 33.8  | 33.8 |
| >600              | 30.7      | 38.3 | 39.4 | 39.5 | 39.5 | 39.5 | 39.5  | 39.5 |
| >300              | 31.0      | 38.9 | 40.1 | 40.1 | 40.1 | 40.2 | 40.2  | 40.2 |
| >150              | 31.1      | 39.0 | 40.1 | 40.2 | 40.2 | 40.3 | 40.3  | 40.3 |
| >0                | 31.1      | 39.0 | 40.2 | 40.3 | 40.3 | 40.4 | 40.4  | 40.4 |
| TOTAL             | 872       | 1093 | 1126 | 1128 | 1129 | 1130 | 1131  | 1131 |

TOTAL NUMBER OF OBS: 2800

PCT FREQ NH <5/8: 59.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7    | 8    | OBS | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|-----|------|------|-----|--------------|
|  | 16.4 | 11.9 | 12.6 | 11.1 | 7.0 | 5.3 | 8.1 | 10.3 | 17.3 | .1  | 2952         |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0004 CANARY ISLANDS  
28.0N 15.2W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E  | SE | S  | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                 |
|--------------|--------|------|------|----|----|----|-----|-----|-----|-----|------|------|--|
| <1/2         | PCP    | .0   | .0   | .0 | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | NO PCP | .0   | .0   | *  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *    |  |
|              | TOT %  | .0   | .0   | *  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *    |  |
| 1/2<1        | PCP    | .0   | .0   | .0 | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | NO PCP | .4   | .3   | .0 | .0 | .0 | .1  | .0  | .1  | .0  | .0   | .8   |  |
|              | TOT %  | .4   | .3   | .0 | .0 | .0 | .1  | .0  | .1  | .0  | .0   | .8   |  |
| 1<2          | PCP    | .0   | .0   | .0 | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | NO PCP | .2   | .1   | .0 | .0 | .0 | .0  | .0  | .1  | .0  | *    | .3   |  |
|              | TOT %  | .2   | .1   | .0 | .0 | .0 | .0  | .0  | .1  | .0  | *    | .3   |  |
| 2<5          | PCP    | *    | .0   | .0 | .0 | .0 | .0  | *   | .0  | .0  | .0   | .1   |  |
|              | NO PCP | 1.2  | .4   | .0 | .0 | *  | .1  | .1  | .3  | .0  | *    | 2.1  |  |
|              | TOT %  | 1.2  | .4   | .0 | .0 | *  | .1  | .1  | .3  | .0  | *    | 2.1  |  |
| 5<10         | PCP    | .2   | .1   | *  | .0 | .0 | *   | .1  | .1  | .0  | .0   | .5   |  |
|              | NO PCP | 11.4 | 9.8  | .8 | .1 | .3 | .2  | .3  | 2.0 | .0  | .4   | 25.6 |  |
|              | TOT %  | 11.6 | 9.9  | .8 | .1 | .3 | .3  | .4  | 2.1 | .0  | .4   | 26.0 |  |
| 10+          | PCP    | .1   | .2   | *  | .0 | .0 | .0  | .1  | .1  | .0  | .0   | .3   |  |
|              | NO PCP | 33.7 | 24.8 | .9 | .2 | .6 | 1.2 | 2.1 | 5.9 | .0  | .9   | 70.3 |  |
|              | TOT %  | 33.8 | 25.0 | .9 | .2 | .6 | 1.2 | 2.2 | 5.9 | .0  | .9   | 70.6 |  |
| TOT OBS      |        |      |      |    |    |    |     |     |     |     |      |      | 3491   |
| TOT PCT      |        |      |      |    |    |    |     |     |     |     |      |      | 47.2 35.6 1.7 .3 .9 1.6 2.8 8.5 .0 1.4 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                 |
|--------------|------------|------|------|-----|----|----|-----|-----|-----|-----|------|------|--|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | 4-10       | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | 11-21      | .0   | .0   | *   | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *    |  |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0   |  |
|              | TOT %      | .0   | .0   | *   | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *    |  |
| 1/2<1        | 0-3        | *    | .0   | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   | *    |  |
|              | 4-10       | .1   | .1   | .0  | .0 | .0 | *   | .0  | *   | .0  | .0   | .2   |  |
|              | 11-21      | .1   | .1   | .0  | .0 | .0 | *   | .0  | .1  | .0  | .0   | .3   |  |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .1   |  |
|              | TOT %      | .3   | .2   | .0  | .0 | .0 | *   | .0  | .1  | .0  | .0   | .6   |  |
| 1<2          | 0-3        | *    | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | *    | *    |  |
|              | 4-10       | .1   | *    | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   | .2   |  |
|              | 11-21      | *    | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *    |  |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   | .1   |  |
|              | TOT %      | .2   | .1   | .0  | .0 | .0 | .0  | .0  | *   | .0  | *    | .3   |  |
| 2<5          | 0-3        | .0   | .0   | .0  | .0 | .0 | *   | .0  | .0  | .0  | *    | *    |  |
|              | 4-10       | .2   | .1   | .0  | .0 | *  | *   | .1  | .1  | .0  | .0   | .5   |  |
|              | 11-21      | .7   | .2   | .0  | .0 | *  | *   | .1  | .0  | .0  | .0   | 1.0  |  |
|              | 22+        | .1   | .1   | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   | .2   |  |
|              | TOT %      | 1.0  | .4   | .0  | .0 | *  | .1  | *   | .2  | .0  | *    | 1.8  |  |
| 5<10         | 0-3        | .1   | .3   | .1  | *  | *  | *   | .1  | .2  | .0  | .3   | 1.1  |  |
|              | 4-10       | 3.4  | 2.5  | .3  | .1 | .1 | .1  | .3  | .9  | .0  | .0   | 7.6  |  |
|              | 11-21      | 5.2  | 4.7  | .2  | *  | *  | .1  | .1  | .5  | .0  | .0   | 10.8 |  |
|              | 22+        | 1.0  | 1.5  | *   | .0 | .0 | *   | *   | *   | .0  | .0   | 2.6  |  |
|              | TOT %      | 9.6  | 9.0  | .7  | .1 | .2 | .2  | .4  | 1.6 | .0  | .3   | 22.1 |  |
| 10+          | 0-3        | 1.2  | .5   | .1  | .1 | .1 | .3  | .1  | .5  | .0  | 1.0  | 3.8  |  |
|              | 4-10       | 12.1 | 8.9  | .6  | .1 | .2 | .4  | 1.4 | 3.5 | .0  | .0   | 27.4 |  |
|              | 11-21      | 17.0 | 17.4 | .7  | .1 | .2 | .3  | .3  | 1.4 | .0  | .0   | 37.3 |  |
|              | 22+        | 2.5  | 3.9  | .1  | .0 | .0 | *   | .0  | .1  | .0  | .0   | 6.7  |  |
|              | TOT %      | 32.8 | 30.7 | 1.5 | .2 | .4 | 1.1 | 1.9 | 5.5 | .0  | 1.0  | 75.2 |  |
| TOT OBS      |            |      |      |     |    |    |     |     |     |     |      |      | 4961   |
| TOT PCT      |            |      |      |     |    |    |     |     |     |     |      |      | 43.9 40.3 2.2 .4 .7 1.4 2.3 7.5 .0 1.3 100.0 |



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PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973AREA 0004 CANARY ISLANDS  
28.0N 15.2W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>259 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .2         | .0         | .0         | 5.3        | 10.4         | 11.3         | 4.7          | 1.2          | .9           | 1.4   | 35.1  | 64.9               | 666          |
| 06009          | .0         | .1         | 1.4        | 7.9        | 19.5         | 16.1         | 6.8          | 1.4          | 1.1          | .7    | 54.8  | 45.2               | 735          |
| 12015          | .1         | .0         | .9         | 5.5        | 14.0         | 11.1         | 4.4          | 1.3          | .8           | 1.2   | 39.2  | 60.8               | 767          |
| 18021          | .1         | .1         | .3         | 3.8        | 10.7         | 8.0          | 3.4          | .7           | .6           | .1    | 27.9  | 72.1               | 710          |
| TOT            | 3          | 2          | 19         | 162        | 395          | 335          | 139          | 33           | 24           | 24    | 1136  | 1742               | 2878         |
| PCT            | .1         | .1         | .7         | 5.6        | 13.7         | 11.6         | 4.8          | 1.1          | .8           | .8    | 39.5  | 60.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .5    | .3  | 1.3 | 19.7 | 78.1 | 1117         |
| 06009          | .2   | .6    | .1  | 1.9 | 27.6 | 69.6 | 1432         |
| 12015          | .0   | .3    | .4  | 2.1 | 18.5 | 78.7 | 1153         |
| 18021          | .0   | 1.2   | .4  | 1.7 | 22.5 | 74.3 | 1363         |
| TOT            | 4    | 35    | 15  | 89  | 1134 | 3788 | 5065         |
| PCT            | .1   | .7    | .3  | 1.8 | 22.4 | 74.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .2            | .2         | 7.0         | 30.5            | 62.6              | 633          |
| 06009          | .0            | 1.8        | 12.6        | 44.9            | 42.5              | 722          |
| 12015          | .1            | 1.1        | 8.9         | 32.1            | 59.0              | 754          |
| 18021          | .1            | .6         | 5.9         | 23.2            | 70.9              | 691          |
| TOT            | 3             | 26         | 243         | 919             | 1638              | 2800         |
| PCT            | .1            | .9         | 8.7         | 32.8            | 58.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | *     | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | *     | .0    | .1    | .0    | .0    | .0     | 3            | .1          |
| 75/79  | .0   | .0    | *     | .3    | .7    | 1.3   | .1    | .2     | 72           | 2.6         |
| 70/74  | .0   | .0    | .0    | .4    | 5.7   | 14.1  | 8.6   | 2.2    | 843          | 30.9        |
| 65/69  | .0   | .0    | .0    | .3    | 4.9   | 24.6  | 25.9  | 8.2    | 1745         | 63.9        |
| 60/64  | .0   | .0    | .0    | .0    | .1    | .7    | 1.0   | .6     | 65           | 2.4         |
| TOTAL  | 0    | 1     | 2     | 26    | 316   | 1109  | 970   | 305    | 2729         | 100.0       |
| PCT    | .0   | *     | .1    | 1.0   | 11.6  | 40.6  | 35.5  | 11.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|----|-----|-----|-----|-----|------|
| .0   | .0   | .0  | .0 | .0 | .0  | *   | *   | .0  | .0   |
| .1   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   |
| 1.1  | 1.3  | *   | .0 | .0 | .0  | *   | .2  | .0  | *    |
| 15.1 | 10.3 | .5  | .1 | .3 | .6  | .9  | 2.7 | .0  | .4   |
| 30.6 | 23.1 | .9  | .1 | .4 | .9  | 2.0 | 5.6 | .0  | .3   |
| 1.3  | .6   | .1  | .0 | *  | .1  | .2  | .1  | .0  | .1   |
| 48.1 | 35.3 | 1.5 | .2 | .8 | 1.5 | 3.2 | 8.6 | .0  | .8   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 81  | 73  | 71  | 68  | 64 | 63 | 58  | 67.6 | 1576         |
| 06009          | 81  | 74  | 72  | 68  | 64 | 63 | 59  | 67.7 | 2178         |
| 12015          | 86  | 79  | 76  | 71  | 67 | 65 | 62  | 71.0 | 1421         |
| 18021          | 85  | 78  | 75  | 70  | 66 | 64 | 62  | 70.1 | 2103         |
| TOT            | 86  | 77  | 74  | 69  | 65 | 63 | 58  | 69.0 | 7278         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 3.3   | 32.7  | 47.5  | 16.6   | 82   | 670          |
| 06009         | .0   | .7    | 6.3   | 38.3  | 40.8  | 13.9   | 80   | 726          |
| 12015         | .0   | 2.6   | 23.5  | 45.1  | 22.1  | 6.7    | 75   | 701          |
| 18021         | .0   | 1.1   | 12.8  | 46.5  | 31.1  | 8.5    | 78   | 697          |
| TOT           | 0    | 31    | 322   | 1137  | 986   | 318    | 79   | 2794         |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

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AREA 0004 CANARY ISLANDS  
28.0N 15.2W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | *        | 3     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | *        | .0       | .0       | .1       | .0       | 4     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .1       | .1       | .2       | .1       | .0       | 14    | *        | .4        |
| 9/10               | .0       | .0       | .2       | .0       | .2       | .3       | .1       | .0       | 26    | .0       | .8        |
| 7/8                | .0       | .0       | *        | .2       | 1.1      | .3       | *        | .0       | 52    | *        | 1.6       |
| 6                  | .0       | .0       | .1       | .5       | .5       | .1       | .0       | .0       | 37    | .1       | 1.0       |
| 5                  | .0       | .0       | .2       | 1.2      | 1.5      | .1       | .0       | .0       | 97    | .2       | 2.9       |
| 4                  | .0       | .0       | .8       | 2.0      | 1.4      | *        | .0       | .0       | 135   | .2       | 4.1       |
| 3                  | .0       | .0       | .7       | 3.6      | 1.2      | .0       | .0       | .0       | 175   | .2       | 5.3       |
| 2                  | .0       | *        | 2.1      | 6.1      | 1.2      | *        | .0       | .0       | 300   | .3       | 9.1       |
| 1                  | *        | .2       | 4.8      | 9.7      | .3       | .0       | .0       | .0       | 482   | .4       | 14.7      |
| 0                  | .0       | .4       | 12.1     | 10.0     | .4       | *        | .0       | .0       | 729   | .8       | 22.1      |
| -1                 | .0       | .3       | 12.7     | 4.9      | .1       | .0       | .0       | .0       | 572   | .4       | 17.6      |
| -2                 | *        | .7       | 6.1      | 1.7      | .2       | .0       | .0       | .0       | 275   | .2       | 8.4       |
| -3                 | .0       | .4       | 2.6      | .8       | .0       | .0       | .0       | .0       | 121   | .1       | 3.7       |
| -4                 | .0       | .6       | 1.6      | .3       | .0       | .0       | .0       | .0       | 79    | *        | 2.5       |
| -5                 | .0       | .5       | .9       | .3       | .0       | .0       | .0       | .0       | 53    | .1       | 1.6       |
| -6                 | .0       | .2       | .2       | .2       | .0       | .0       | .0       | .0       | 16    | .0       | .5        |
| -7/-8              | .0       | .1       | .1       | *        | .0       | .0       | .0       | .0       | 7     | *        | .2        |
| -9/-10             | *        | .1       | *        | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| TOTAL              | 3        |          | 1439     |          | 260      |          | 12       |          | 3181  | 102      | 3079      |
| PCT                | .1       |          | 107      |          | 36       |          | 1        |          | 100.0 | 3.2      | 96.8      |
|                    |          |          | 3.4      | 45.2     | 41.6     | 8.2      | 1.1      | .4       |       |          |           |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|---------|-----|------|-------|-------|-------|-----|------|
| <1      | .4  | 1.5  | .2    | .0    | .0    | .0  | 2.2  | <1      | .2  | .8   | *     | .0    | .0    | .0  | 1.1  |
| 1-2     | .2  | 8.4  | 4.5   | .0    | .0    | .0  | 13.1 | 1-2     | .0  | 4.3  | 2.8   | .0    | .0    | .0  | 7.1  |
| 3-4     | .0  | 3.7  | 12.2  | .4    | .0    | .0  | 16.4 | 3-4     | .1  | 1.8  | 8.1   | .8    | .0    | .0  | 10.7 |
| 5-6     | .0  | .9   | 7.9   | 1.6   | .1    | .0  | 10.4 | 5-6     | .0  | .4   | 6.3   | 1.6   | *     | .0  | 8.3  |
| 7       | .0  | .1   | 3.3   | 1.1   | *     | .0  | 4.6  | 7       | .0  | .1   | 2.7   | 1.0   | *     | .0  | 3.8  |
| 8-9     | .0  | .0   | .8    | .4    | .0    | .0  | 1.2  | 8-9     | .0  | .0   | .9    | .6    | .0    | .0  | 1.4  |
| 10-11   | .0  | .0   | .1    | .5    | *     | .0  | .6   | 10-11   | .0  | .0   | .2    | .5    | .1    | .0  | .8   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 14.6 | 29.0  | 4.3   | .2    | .0  | 48.7 | TOT PCT | .3  | 7.3  | 21.1  | 4.7   | .1    | .0  | 33.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|---------|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .1  | <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .2   | .1    | .0    | .0    | .0  | .4  | 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .0   | .3    | .1    | .0    | .0  | .3  | 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 5-6     | .1  | .0   | .1    | .1    | .0    | .0  | .2  | 5-6     | .0  | .0   | .0    | .5    | .0    | .0  | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .3   | .6    | .1    | .0    | .0  | 1.1 | TOT PCT | .0  | .1   | .1    | .0    | .0    | .0  | .2  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .2  | .1   | .0    | .0    | .0    | .0  | .3  |
| 1-2     | .1  | .2   | .1    | .0    | .0    | .0  | .3  | .1  | .2   | .2    | .0    | .0    | .0  | .5  |
| 3-4     | .0  | .1   | .4    | .0    | .0    | .0  | .5  | .0  | .2   | .3    | .1    | .0    | .0  | .6  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .4   | .6    | .0    | .0    | .0  | 1.1 | .3  | .4   | .9    | .1    | .0    | .0  | 1.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .5   | .0    | .0    | .0    | .0  | .6  | .2  | .8   | .0    | .0    | .0    | .0  | .9  |           |
| 1-2     | .0  | 1.2  | .2    | .0    | .0    | .0  | 1.3 | .3  | 3.2  | .6    | .0    | .0    | .0  | 4.1 |           |
| 3-4     | .0  | .4   | .3    | .0    | .0    | .0  | .7  | .0  | 1.1  | 1.4   | .1    | .0    | .0  | 2.6 |           |
| 5-6     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | .1   | .5    | *     | .0    | .0  | .6  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .1    | .0    | .0  | .1  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | 2.2  | .7    | .0    | .0    | .0  | 2.9 | .5  | 5.2  | 2.5   | .3    | .0    | .0  | 8.5 | 97.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.8 | 4.0  | .3    | .0    | .0    | .0  | 8.0   |         |
| 1-2     | .7  | 17.7 | 8.5   | .0    | .0    | .0  | 26.9  |         |
| 3-4     | .2  | 7.2  | 22.8  | 1.5   | .0    | .0  | 31.6  |         |
| 5-6     | .1  | 1.4  | 15.2  | 3.3   | .1    | .0  | 20.0  |         |
| 7       | .0  | .2   | 6.2   | 2.2   | .1    | .0  | 8.6   |         |
| 8-9     | .0  | .0   | 1.8   | .9    | .0    | .0  | 2.7   |         |
| 10-11   | .0  | .0   | .3    | 1.1   | .1    | .0  | 1.5   |         |
| 12      | .0  | .1   | .0    | .2    | .0    | .0  | .3    |         |
| 13-16   | .0  | .0   | .1    | .3    | .0    | .0  | .4    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.7 | 30.6 | 55.1  | 9.4   | .3    | .0  | 100.0 | 1858    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.2 | 7.9  | 13.1 | 6.0  | 3.5  | 1.0 | .5    | *   | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 747   | 4        |
| 6-7          | .0  | 1.4  | 5.9  | 9.4  | 5.6  | 3.1 | 1.0   | .3  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 600   | 6        |
| 8-9          | .0  | .5   | 1.5  | 3.0  | 2.2  | 1.4 | 1.0   | .3  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 223   | 6        |
| 10-11        | .0  | .6   | .6   | .8   | .8   | .9  | .4    | .2  | *     | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100   | 8        |
| 12-13        | .0  | .0   | .5   | .3   | *    | .2  | .4    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 39    | 7        |
| >13          | .0  | .0   | .0   | .1   | *    | *   | .1    | *   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 8     | 8        |
| INDET        | 2.2 | 3.9  | 7.0  | 3.8  | 3.5  | 1.3 | .8    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 508   | 4        |
| TOTAL        | 75  | 319  | 640  | 521  | 350  | 177 | 93    | 27  | 18    | 2     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2225  | 5        |
| PCT          | 3.4 | 14.3 | 28.8 | 23.4 | 15.7 | 8.0 | 4.2   | 1.2 | .8    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

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TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |           |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------|------------|
|          | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | BLWG DUST | NO SIG WEA |
| N        | .0                 | .1        | .1   | .0        | .0   | .0              | *    | .3                      | .1             | .3        | 3.7         | .0                  | 6.7        | .3        | 88.7       |
| NE       | .1                 | .2        | .0   | .0        | .0   | .0              | *    | .4                      | .1             | .1        | 3.1         | *                   | 6.2        | .4        | 89.7       |
| E        | .0                 | .8        | .0   | .0        | .0   | .0              | .0   | .8                      | .0             | .0        | 6.5         | 1.2                 | 4.8        | .0        | 86.7       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 11.1      | 11.1        | .0                  | .0         | .0        | 77.8       |
| S        | .0                 | .0        | 5.4  | .0        | .0   | .0              | .0   | 5.4                     | .0             | .0        | 8.1         | .0                  | 8.1        | .0        | 78.4       |
| SW       | .0                 | .0        | 2.0  | .0        | .0   | .0              | .0   | 2.0                     | .0             | .0        | 8.8         | .0                  | 4.9        | .0        | 84.3       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0        | 100.0      |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .3        | 7.2         | .0                  | 7.2        | 1.0       | 84.3       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0        | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 10.5        | .0                  | 5.3        | .0        | 84.2       |
| TOT PCT  | .1                 | .2        | .1   | .0        | .0   | .0              | *    | .3                      | .1             | .2        | 3.7         | *                   | 6.4        | .4        | 88.9       |
| TOT OBS: | 3923               |           |      |           |      |                 |      |                         |                |           |             |                     |            |           |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |           |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------|------------|
|            | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | BLWG DUST | NO SIG WEA |
| 00003      | .1                 | .1        | .3   | .0        | .0   | .0              | .1   | .6                      | .1             | .3        | 3.2         | .1                  | 4.2        | .4        | 90.9       |
| 06009      | .1                 | .4        | .0   | .0        | .0   | .0              | .0   | .5                      | .2             | .4        | 4.1         | .0                  | 5.7        | .4        | 88.7       |
| 12015      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 3.7         | .0                  | 7.7        | .3        | 88.3       |
| 18021      | .0                 | .2        | .0   | .0        | .0   | .0              | .0   | .2                      | .0             | .2        | 3.9         | .0                  | 7.7        | .4        | 87.7       |
| TOT PCT    | .1                 | .2        | .1   | .0        | .0   | .0              | *    | .3                      | .1             | .2        | 3.8         | *                   | 6.4        | .4        | 88.8       |
| TOT OBS:   | 3984               |           |      |           |      |                 |      |                         |                |           |             |                     |            |           |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .6                 | 11.5 | 22.7  | 5.5   | .4    | .0  |      | 40.8      | 14.7     |          | 40.5       | 48.6  | 41.8  | 35.5  | 41.6  | 51.8  | 42.2  | 37.7  |
| NE       | .4                 | 10.7 | 28.2  | 10.4  | .8    | .0  |      | 50.5      | 16.4     |          | 50.0       | 49.1  | 49.5  | 56.1  | 49.5  | 42.5  | 50.1  | 52.1  |
| E        | .1                 | .8   | 1.2   | .3    | *     | .0  |      | 2.4       | 13.9     |          | 2.5        | .0    | 2.1   | 3.3   | 2.7   | .0    | 2.1   | 2.4   |
| SE       | *                  | .2   | .1    | *     | .0    | .0  |      | .4        | 9.9      |          | .3         | .0    | .4    | .2    | .3    | 1.2   | .3    | .8    |
| S        | *                  | .1   | .1    | *     | *     | .0  |      | .2        | 11.6     |          | .3         | .0    | .1    | .1    | .3    | .0    | .2    | .2    |
| SW       | *                  | .3   | .1    | *     | .0    | .0  |      | .5        | 8.5      |          | .4         | .0    | .7    | .2    | .5    | .0    | .5    | .6    |
| W        | .1                 | .6   | *     | *     | .0    | .0  |      | .8        | 6.7      |          | 1.1        | .0    | .9    | .7    | .6    | .0    | .3    | 1.2   |
| NW       | .3                 | 2.0  | 1.3   | .2    | *     | .0  |      | 3.8       | 10.4     |          | 4.0        | 2.3   | 3.9   | 3.1   | 3.9   | 4.5   | 3.6   | 4.2   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .7                 |      |       |       |       |     |      | .7        | .0       |          | 1.0        | .0    | .5    | .7    | .7    | .0    | .6    | .7    |
| TOT OBS  | 177                | 2026 | 4143  | 1278  | 98    | 0   | 7722 |           | 15.1     |          | 1569       | 88    | 1557  | 693   | 1448  | 83    | 1479  | 805   |
| TOT PCT  | 2.3                | 26.2 | 53.7  | 16.6  | 1.3   | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 3.6                | 21.9 | 13.4  | 1.8   | .1  | 40.8      | 14.7     |          | 40.9       | 39.9  | 42.1  | 40.6  |
| NE       | 2.7                | 23.0 | 21.1  | 3.6   | .1  | 50.5      | 16.4     |          | 49.9       | 51.6  | 49.1  | 50.8  |
| E        | .4                 | 1.2  | .7    | .1    | *   | 2.4       | 13.9     |          | 2.3        | 2.5   | 2.5   | 2.2   |
| SE       | .2                 | .1   | .1    | *     | .0  | .4        | 9.9      |          | .3         | .3    | .4    | .5    |
| S        | .1                 | .1   | *     | *     | .0  | .2        | 11.6     |          | .3         | .1    | .2    | .2    |
| SW       | .2                 | .2   | *     | *     | .0  | .5        | 8.5      |          | .4         | .5    | .5    | .5    |
| W        | .5                 | .2   | *     | *     | .0  | .8        | 6.7      |          | 1.0        | .9    | .5    | .6    |
| NW       | 1.2                | 2.0  | .5    | .1    | .0  | 3.8       | 10.4     |          | 3.9        | 3.7   | 3.9   | 3.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | .7                 |      |       |       |     | .7        | .0       |          | .9         | .6    | .7    | .7    |
| TOT OBS  | 735                | 3765 | 2773  | 434   | 15  | 7722      |          | 15.1     | 1657       | 2250  | 1531  | 2284  |
| TOT PCT  | 9.5                | 48.8 | 35.9  | 5.6   | .2  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

JULY

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |       |          |           |
| 00003 | .9   | 1.0 | 27.1 | 52.5               | 17.3  | 1.1   | .0 | 15.2  | 100.0    | 1657      |
| 06009 | .6   | 1.8 | 27.5 | 53.5               | 15.4  | 1.3   | .0 | 14.9  | 100.0    | 2250      |
| 12015 | .7   | 1.4 | 25.7 | 54.0               | 16.7  | 1.6   | .0 | 15.4  | 100.0    | 1531      |
| 18021 | .7   | 2.0 | 24.7 | 54.5               | 17.1  | 1.1   | .0 | 15.2  | 100.0    | 2284      |
| TOT   | 53   | 124 | 2026 | 4143               | 1278  | 98    | 0  | 15.1  |          | 7722      |
| PCT   | .7   | 1.6 | 26.2 | 53.7               | 16.6  | 1.3   | .0 | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 19.6 | 6.6  | 11.8 | 10.6       |              | 3.9                    |
| NE       | 20.8 | 5.7  | 9.9  | 7.5        |              | 3.4                    |
| E        | .6   | .2   | .4   | .3         |              | 4.0                    |
| SE       | .1   | *    | .1   | *          |              | 3.5                    |
| S        | .2   | .1   | *    | *          |              | 2.7                    |
| SW       | .4   | .1   | .1   | .1         |              | 2.7                    |
| W        | .3   | .1   | *    | *          |              | 2.0                    |
| NW       | 2.0  | .4   | .6   | .7         |              | 3.1                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | .6   | *    | .0   | *          |              | .6                     |
| TOT OBS  | 1404 | 415  | 726  | 612        | 3157         | 3.6                    |
| TOT PCT  | 44.5 | 13.1 | 23.0 | 19.4       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .1         | .1         | .7         | 2.8        | 7.2          | 5.8          | 1.7          | .6           | .2           | .6    | 28.7               |              |
| NE      | .1         | .0         | .3         | 2.2        | 4.8          | 5.0          | 1.5          | .5           | .1           | .6    | 28.8               |              |
| E       | .0         | *          | .0         | .1         | .2           | .2           | .1           | *            | *            | .0    | .8                 |              |
| SE      | .0         | .0         | .0         | *          | *            | .0           | .0           | .0           | .0           | .0    | .2                 |              |
| S       | .0         | .0         | *          | .0         | .0           | .0           | .0           | *            | *            | .0    | .2                 |              |
| SW      | *          | .0         | *          | .0         | *            | .0           | .1           | *            | *            | .0    | .5                 |              |
| W       | .0         | .0         | .0         | .0         | *            | .0           | .0           | .0           | .0           | .0    | .5                 |              |
| NW      | .1         | .0         | *          | .1         | .3           | .2           | .1           | *            | *            | .0    | 2.5                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | *          | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .6                 |              |
| TOT OBS | 10         | 3          | 33         | 167        | 396          | 360          | 114          | 42           | 12           | 40    | 1980               | 3157         |
| TOT PCT | .3         | .1         | 1.0        | 5.3        | 12.5         | 11.4         | 3.6          | 1.3          | .4           | 1.3   | 62.7               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.5        | 1.6        | 1.6        | 1.6          | 1.6          | 1.6           | 1.6        |
| = OR >5000        | 1.8         | 2.8        | 2.9        | 2.9        | 2.9          | 2.9          | 2.9           | 2.9        |
| = OR >3500        | 4.4         | 6.3        | 6.6        | 6.6        | 6.6          | 6.6          | 6.6           | 6.6        |
| = OR >2000        | 11.9        | 17.0       | 17.9       | 18.0       | 18.0         | 18.0         | 18.0          | 18.0       |
| = OR >1000        | 21.0        | 29.0       | 30.4       | 30.4       | 30.4         | 30.4         | 30.4          | 30.4       |
| = OR >600         | 24.6        | 34.1       | 35.7       | 35.8       | 35.8         | 35.8         | 35.8          | 35.8       |
| = OR >300         | 25.0        | 35.0       | 36.7       | 36.8       | 36.8         | 36.8         | 36.8          | 36.8       |
| = OR >150         | 25.0        | 35.0       | 36.7       | 36.9       | 36.9         | 36.9         | 36.9          | 36.9       |
| = OR >0           | 25.0        | 35.1       | 37.0       | 37.1       | 37.1         | 37.1         | 37.2          | 37.2       |
| TOTAL             | 792         | 1111       | 1171       | 1175       | 1176         | 1177         | 1179          | 1179       |

TOTAL NUMBER OF OBS: 3169

PCT FREQ NH <5/8: 62.8

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8    | OBS | TOTAL<br>OBS |
|--|------|------|-----|-----|-----|-----|-----|-----|------|-----|--------------|
|  | 28.6 | 10.4 | 9.4 | 7.8 | 5.9 | 5.2 | 6.7 | 9.2 | 16.5 | .3  | 3347         |

PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

JULY

TABLE 8

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | .1   | .0   | .0  | .0 | .0 | *  | .0 | .0  | .0  | *    | .1    |              |
|              | TOT %  | .1   | *    | .0  | .0 | .0 | *  | .0 | .0  | .0  | *    | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | *  | *  | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | .3   | .6   | .1  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.0   |              |
|              | TOT %  | .3   | .6   | .1  | .0 | *  | *  | .0 | *   | .0  | .0   | 1.0   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .5   | .5   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | 1.1   |              |
|              | TOT %  | .5   | .5   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | 1.1   |              |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .3  | .0  | .0   | .0    |              |
|              | NO PCP | 2.2  | 1.3  | .1  | .0 | *  | .1 | .0 | .3  | .0  | .1   | 4.1   |              |
|              | TOT %  | 2.2  | 1.3  | .1  | .0 | *  | .1 | .0 | .3  | .0  | .1   | 4.1   |              |
| 5<10         | PCP    | .1   | .1   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3    |              |
|              | NO PCP | 15.5 | 15.8 | .5  | .1 | *  | .1 | .2 | 1.6 | .0  | .1   | 34.1  |              |
|              | TOT %  | 15.7 | 15.9 | .6  | .1 | *  | .1 | .2 | 1.6 | .0  | .1   | 34.4  |              |
| 10+          | PCP    | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | 28.8 | 26.6 | .8  | .1 | .2 | .4 | .4 | 1.8 | .0  | .2   | 59.3  |              |
|              | TOT %  | 28.8 | 26.6 | .8  | .1 | .2 | .4 | .4 | 1.8 | .0  | .2   | 59.3  |              |
| TOT OBS      |        |      |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |        | 47.6 | 44.9 | 1.6 | .2 | .2 | .7 | .6 | 3.8 | .0  | .5   | 100.0 | 3913         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     |              |
|              | 11-21      | .0   | .0   | .0  | .0 | .0 | *  | .0 | .0  | .0  | *    | *     |              |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | *     |              |
|              | TOT %      | *    | *    | .0  | .0 | .0 | *  | .0 | *   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .1   | .3   | .1  | .0 | *  | *  | .0 | *   | .0  | .0   | .5    |              |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .2   | .4   | .1  | .0 | *  | *  | .0 | *   | .0  | .0   | .7    |              |
| 1<2          | 0-3        | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 4-10       | .1   | .1   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | .3    |              |
|              | 11-21      | .3   | .2   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .5    |              |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .4   | .4   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | .9    |              |
| 2<5          | 0-3        | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | .1   | .2    |              |
|              | 4-10       | .5   | .1   | *   | *  | *  | *  | .0 | .2  | .0  | .0   | .9    |              |
|              | 11-21      | 1.1  | .8   | *   | .0 | .0 | *  | .0 | .1  | .0  | .0   | 2.1   |              |
|              | 22+        | .4   | .5   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | 1.0   |              |
|              | TOT %      | 2.1  | 1.5  | *   | *  | *  | *  | .0 | .3  | .0  | .1   | 4.1   |              |
| 5<10         | 0-3        | .2   | .1   | *   | *  | .0 | *  | *  | *   | .0  | .1   | .6    |              |
|              | 4-10       | 3.5  | 2.7  | .1  | *  | .0 | .1 | .1 | .5  | .0  | .0   | 7.0   |              |
|              | 11-21      | 7.5  | 8.1  | .3  | *  | *  | *  | .0 | .6  | .0  | .0   | 16.6  |              |
|              | 22+        | 3.0  | 4.3  | *   | *  | *  | *  | *  | .2  | .0  | .0   | 7.5   |              |
|              | TOT %      | 14.1 | 15.2 | .5  | .1 | *  | .1 | .1 | 1.3 | .0  | .1   | 31.6  |              |
| 10+          | 0-3        | .3   | .1   | *   | .0 | *  | *  | *  | .2  | .0  | .3   | 1.1   |              |
|              | 4-10       | 7.8  | 6.0  | .3  | .1 | *  | .2 | .3 | 1.0 | .0  | .0   | 15.9  |              |
|              | 11-21      | 16.3 | 18.0 | .6  | *  | .1 | .1 | *  | .7  | .0  | .0   | 35.8  |              |
|              | 22+        | 3.5  | 6.1  | .1  | *  | *  | .0 | .0 | .1  | .0  | .0   | 9.8   |              |
|              | TOT %      | 27.9 | 30.2 | 1.1 | .1 | .2 | .3 | .4 | 2.0 | .0  | .3   | 62.5  |              |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            | 44.8 | 47.8 | 1.7 | .3 | .2 | .5 | .5 | 3.7 | .0  | .6   | 100.0 | 5503         |



PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

JULY

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+     | TOTAL        | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-----------|--------------|--------------------|---------------|
| 00003         | .9         | .0         | .9         | 4.4        | 12.0         | 9.3          | 3.2          | .8           | .1           | 1.3       | 33.0         | 67.0               | 752           |
| 06009         | .1         | .2         | 1.5        | 7.8        | 16.3         | 14.3         | 5.4          | 2.1          | .4           | 1.2       | 49.3         | 50.7               | 811           |
| 12015         | .1         | .1         | .8         | 4.9        | 11.7         | 11.8         | 4.0          | 1.5          | .5           | 1.2       | 36.6         | 63.4               | 856           |
| 18021         | .1         | .0         | .8         | 3.7        | 9.0          | 9.0          | 1.7          | .7           | .5           | 1.2       | 26.6         | 73.4               | 845           |
| TOT<br>PCT    | 10<br>.3   | 3<br>.1    | 33<br>1.0  | 169<br>5.2 | 398<br>12.2  | 363<br>11.1  | 116<br>3.6   | 42<br>1.3    | 12<br>.4     | 40<br>1.2 | 1186<br>36.3 | 2078<br>63.7       | 3264<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2    | 1/2<1    | 1<2      | 2<5        | 5<10         | 10+          | TOTAL<br>OBS  |
|---------------|---------|----------|----------|------------|--------------|--------------|---------------|
| 00003         | .2      | .6       | .6       | 4.1        | 26.4         | 68.0         | 1232          |
| 06009         | .2      | 1.1      | 1.1      | 3.2        | 33.4         | 61.1         | 1523          |
| 12015         | .2      | .7       | .7       | 4.0        | 30.0         | 64.5         | 1238          |
| 18021         | .1      | .7       | 1.1      | 5.1        | 35.6         | 57.4         | 1571          |
| TOT<br>PCT    | 9<br>.2 | 44<br>.8 | 51<br>.9 | 228<br>4.1 | 1765<br>31.7 | 3467<br>62.3 | 5564<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|---------------|---------------|------------|-------------|-----------------|-------------------|---------------|
| 00003         | 1.0           | 2.2        | 10.5        | 26.2            | 63.3              | 724           |
| 06009         | .1            | 2.0        | 13.6        | 39.1            | 47.3              | 787           |
| 12015         | .1            | 1.1        | 10.2        | 29.7            | 60.2              | 836           |
| 18021         | .1            | 1.0        | 9.4         | 21.0            | 69.6              | 822           |
| TOT<br>PCT    | 10<br>.3      | 49<br>1.5  | 345<br>10.9 | 919<br>29.0     | 1905<br>60.1      | 3169<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .1    | .1    | .0    | .0     | 4            | .1          |
| 80/84  | .0   | .0    | *     | .1    | .2    | .1    | .2    | .0     | 19           | .6          |
| 75/79  | .0   | .0    | *     | .3    | 1.7   | 3.4   | 1.7   | .3     | 229          | 7.4         |
| 70/74  | .0   | .0    | .0    | .2    | 3.3   | 20.9  | 24.8  | 11.1   | 1861         | 60.3        |
| 65/69  | .0   | .0    | .0    | *     | .6    | 8.4   | 16.3  | 8.1    | 969          | 31.4        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | *     | .0    | *      | 2            | .1          |
| TOTAL  | 0    | 0     | 2     | 19    | 180   | 1017  | 1326  | 540    | 3084         | 100.0       |
| PCT    | .0   | .0    | .1    | .6    | 5.8   | 33.0  | 43.0  | 17.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| .1   | *    | .0  | .0 | .0 | *  | .0 | .0  | .0  | .0   |
| .3   | .3   | *   | *  | .0 | .0 | .0 | .0  | .0  | .0   |
| 3.5  | 3.1  | .2  | *  | .0 | .0 | *  | .5  | .0  | .1   |
| 28.8 | 27.2 | .9  | .2 | .1 | .3 | .4 | 2.2 | .0  | .1   |
| 15.6 | 14.6 | .3  | *  | .0 | .1 | .1 | .7  | .0  | .1   |
| .0   | *    | .0  | .0 | .0 | .0 | *  | *   | .0  | .0   |
| 48.3 | 45.2 | 1.4 | .3 | .1 | .5 | .6 | 3.4 | .0  | .3   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 83  | 75  | 73  | 69  | 67 | 65 | 61  | 69.6 | 1659         |
| 06009         | 82  | 76  | 73  | 70  | 66 | 65 | 59  | 69.8 | 2238         |
| 12015         | 86  | 81  | 78  | 72  | 69 | 67 | 63  | 72.7 | 1491         |
| 18021         | 85  | 81  | 77  | 72  | 68 | 66 | 63  | 71.9 | 2248         |
| TOT           | 86  | 79  | 76  | 71  | 67 | 65 | 59  | 71.0 | 7636         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .4    | 2.3   | 25.2  | 46.9  | 25.2   | 84   | 731          |
| 06009         | .0   | .5    | 3.6   | 25.4  | 46.5  | 24.0   | 83   | 800          |
| 12015         | .0   | 1.3   | 11.4  | 44.0  | 35.0  | 8.3    | 78   | 769          |
| 18021         | .0   | .5    | 5.9   | 36.5  | 43.9  | 13.2   | 81   | 813          |
| TOT           | 0    | 21    | 182   | 1022  | 1341  | 547    | 82   | 3113         |

PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .1       | *        |          | 3     | .1       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | .1       | .2       | .1       | 11    | *        | .3        |
| 9/10               | .0       | .0       | .0       | *        | .2       | .4       | .1       | .0       | 25    | .1       | .6        |
| 7/8                | .0       | .0       | *        | .1       | .4       | 1.0      | .2       | .0       | 63    | .2       | 1.6       |
| 6                  | .0       | .0       | *        | .2       | .9       | .4       | .0       | .0       | 57    | .1       | 1.5       |
| 5                  | .0       | .0       | *        | .6       | 1.8      | .6       | .0       | .0       | 108   | .1       | 2.9       |
| 4                  | .0       | *        | .2       | 1.5      | 3.0      | .4       | *        | .0       | 183   | .2       | 4.9       |
| 3                  | .0       | .0       | .3       | 3.2      | 4.1      | .1       | .0       | .0       | 279   | .4       | 7.4       |
| 2                  | .0       | .0       | .6       | 7.4      | 3.3      | .2       | .0       | .0       | 413   | .5       | 11.0      |
| 1                  | .0       | .0       | 1.3      | 14.8     | 2.8      | *        | .0       | .0       | 678   | .6       | 18.3      |
| 0                  | .0       | *        | 3.3      | 17.1     | 1.2      | *        | *        | .0       | 776   | .8       | 20.9      |
| -1                 | .0       | .0       | 4.2      | 10.5     | .4       | .1       | .0       | .0       | 543   | .3       | 14.8      |
| -2                 | .0       | .1       | 2.7      | 3.3      | .3       | .0       | .0       | .0       | 233   | .2       | 6.3       |
| -3                 | .0       | .1       | .7       | 1.4      | .2       | .0       | .0       | .0       | 83    | *        | 2.3       |
| -4                 | .0       | .1       | .8       | .7       | *        | .0       | .0       | .0       | 60    | .1       | 1.5       |
| -5                 | .0       | .1       | .3       | .4       | .1       | .0       | .0       | .0       | 32    | .0       | .9        |
| -6                 | .0       | .1       | .2       | .2       | .1       | .0       | .0       | .0       | 17    | .0       | .5        |
| -7/-8              | *        | .1       | .0       | .2       | .0       | .0       | .0       | .0       | 10    | .1       | .2        |
| -9/-10             | *        | *        | *        | *        | .1       | .0       | .0       | .0       | 6     | .0       | .2        |
| -11/-13            | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .1       | .1        |
| -14/-16            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 2        |          | 521      |          | 677      |          | 20       |          | 3585  | 142      | 3443      |
| PCT                | .1       | .8       | 14.5     | 61.8     | 18.9     | 3.3      | .6       | .1       | 100.0 | 4.0      | 96.0      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | .2  | 1.1  | .1    | .0    | .0    | .0  | 1.4  | .1  | .4   | *     | .0    | .0    | .0  | .5   |
| 1-2     | .1  | 5.5  | 4.3   | .0    | .0    | .0  | 10.0 | *   | 3.5  | 3.7   | .0    | .0    | .0  | 7.2  |
| 3-4     | .1  | 3.8  | 11.1  | 1.2   | .0    | .0  | 16.2 | .0  | 1.9  | 8.7   | 1.8   | .0    | .0  | 12.4 |
| 5-6     | .0  | .9   | 7.9   | 1.9   | .1    | .0  | 10.8 | .0  | .3   | 8.9   | 2.2   | .1    | .0  | 11.5 |
| 7       | .0  | *    | 3.5   | 1.7   | .1    | .0  | 5.3  | .0  | *    | 3.6   | 2.8   | .1    | .0  | 6.6  |
| 8-9     | .0  | .0   | 1.5   | 1.1   | .1    | .0  | 2.6  | .0  | .0   | 1.4   | 1.9   | .1    | .0  | 3.3  |
| 10-11   | .0  | .0   | .5    | .9    | .1    | .0  | 1.6  | .0  | .0   | .5    | 1.1   | .2    | .0  | 1.8  |
| 12      | .0  | .0   | .0    | .6    | .0    | .0  | .6   | .0  | .0   | *     | .3    | *     | .0  | .4   |
| 13-16   | .0  | .0   | .0    | .4    | *     | .0  | .4   | .0  | .0   | .0    | .4    | .2    | .0  | .6   |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 11.4 | 28.8  | 7.8   | .5    | .0  | 48.9 | .1  | 6.1  | 26.9  | 10.6  | .6    | .0  | 44.4 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | *   | .1   | .0    | .0    | .0    | .0  | .2  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .1   | .3    | .1    | .0    | .0  | .4  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | *    | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | .3   | .7    | .1    | *     | .0  | 1.3 | .0  | .2   | .1    | .0    | .0    | .0  | .3  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .0   | .0    | .0    | .0    | .0  | *   | *   | .0   | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .4  |
| 3-4     | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | *   | *   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | *    | *     | .0    | .0    | .0  | .1  | *   | .4   | .1    | .0    | .0    | .0  | .5  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | *    | .0    | .0    | .0    | .0  | *   | .1  | .3   | .1    | .0    | .0    | .0  | .5  |           |
| 1-2     | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .1  | .9   | .6    | .0    | .0    | .0  | 1.5 |           |
| 3-4     | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .2   | .3    | .1    | .0    | .0  | .6  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .4    | .2    | .0    | .0  | .6  |           |
| 7       | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | .1    | .1    | .0    | .0  | .3  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .2  | 1.5  | 1.5   | .4    | .0    | .0  | 3.6 | 99.4      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT DBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.3 | 2.0  | .2    | .0    | .0    | .0  | 3.4   |         |
| 1-2     | .2  | 10.7 | 8.8   | .0    | .0    | .0  | 19.7  |         |
| 3-4     | .1  | 6.2  | 20.3  | 3.2   | .0    | .0  | 29.7  |         |
| 5-6     | .0  | 1.4  | 17.4  | 4.2   | .2    | .0  | 23.2  |         |
| 7       | .0  | .2   | 7.4   | 4.7   | .2    | .0  | 12.4  |         |
| 8-9     | .0  | .0   | 2.8   | 3.0   | .2    | .0  | 6.0   |         |
| 10-11   | .0  | .0   | 1.1   | 2.0   | .3    | .0  | 3.4   |         |
| 12      | .0  | .0   | *     | .9    | .1    | .0  | 1.0   |         |
| 13-16   | .0  | .0   | .0    | .8    | .2    | .0  | 1.0   |         |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 1.6 | 20.4 | 58.0  | 18.9  | 1.2   | .0  | 100.0 | 2158    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .4  | 4.9 | 10.1 | 8.1  | 3.9  | 1.9  | .6    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 772      |
| 6-7          | .0  | 1.1 | 6.3  | 8.0  | 6.7  | 3.8  | 1.7   | .7  | .4    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 735      |
| 8-9          | .0  | .1  | 1.1  | 2.3  | 3.7  | 3.2  | 1.8   | .7  | .8    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 354      |
| 10-11        | .0  | .1  | .4   | .7   | .8   | .9   | 1.0   | .4  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 117      |
| 12-13        | .0  | .0  | 1.1  | .5   | .5   | .4   | .2    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 72       |
| >13          | .0  | .0  | .0   | .1   | .4   | *    | *     | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 18       |
| INDET        | .8  | 3.1 | 6.0  | 3.1  | 2.1  | 1.5  | 1.3   | .5  | .5    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 483      |
| TOTAL        | 31  | 235 | 639  | 582  | 462  | 299  | 169   | 68  | 58    | 6     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2551     |
| PCT          | 1.2 | 9.2 | 25.0 | 22.8 | 18.1 | 11.7 | 6.6   | 2.7 | 2.3   | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



AD-A031 778

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
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F/G 4/2

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4 of 7  
ADA031778



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1894-1973

AUGUST

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                           |            |  |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|---------------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST BLWG SNOW | NO SIG WEA |  |
| N                  | .1   | *         | .2   | .0        | .0   | .0             | .0   | .4              | .2             | .1                      | 3.5         | .0                  | 3.7        | *                         | 92.1       |  |
| NE                 | .1   | .1        | *    | .0        | .0   | .0             | .0   | .2              | .3             | .3                      | 3.4         | .0                  | 3.8        | .2                        | 91.9       |  |
| E                  | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | 4.4         | .0                  | 1.5        | .0                        | 94.1       |  |
| SE                 | .0   | 9.5       | .0   | .0        | .0   | .0             | .0   | 9.5             | .0             | .0                      | .0          | .0                  | .0         | .0                        | 90.5       |  |
| S                  | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | 4.5         | .0                  | .0         | .0                        | 95.5       |  |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | 14.3        | .0                  | 4.8        | .0                        | 81.0       |  |
| W                  | .0   | .0        | 1.9  | .0        | .0   | .0             | .0   | 1.9             | .0             | .0                      | 5.2         | .0                  | 5.2        | .0                        | 87.7       |  |
| NW                 | .0   | .0        | .2   | .0        | .0   | .0             | .0   | .2              | .0             | .0                      | 4.0         | .0                  | 5.6        | .0                        | 90.2       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | 3.3            | .0                      | 6.7         | .0                  | 3.3        | .0                        | 86.7       |  |
| TOT PCT            | .1   |           |      |           |      |                |      |                 |                |                         |             |                     |            |                           |            |  |
| TOT OBS:           | 3814 | .1        | .1   | .0        | .0   | .0             | .0   | .3              | .2             | .2                      | 3.6         | .0                  | 3.8        | .1                        | 91.8       |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .1                 | .1           | .1   | .0           | .0   | .0                    | .0   | .3                      | .0                | .2           | 2.5               | .0                        | 2.1           | .0                                    | 94.8             |
| 06009         | .2                 | .0           | .2   | .0           | .0   | .0                    | .0   | .4                      | .6                | .5           | 4.3               | .0                        | 3.1           | .0                                    | 91.1             |
| 12015         | .1                 | .1           | .2   | .0           | .0   | .0                    | .0   | .4                      | .1                | .0           | 3.3               | .0                        | 5.5           | .2                                    | 90.5             |
| 18021         | .0                 | .1           | .0   | .0           | .0   | .0                    | .0   | .1                      | .1                | .0           | 4.1               | .0                        | 4.2           | .2                                    | 91.3             |
| TOT PCT       | .1                 |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                                       |                  |
| TOT OBS:      | 3877               | .1           | .1   | .0           | .0   | .0                    | .0   | .3                      | .2                | .2           | 3.6               | .0                        | 3.8           | .1                                    | 91.8             |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .6                 | 12.0 | 21.4  | 4.7   | .2    | .0  |      | 39.0      | 14.1     |          | 38.4       | 52.1  | 39.9  | 34.3  | 39.8  | 52.1  | 41.2  | 33.8  |
| NE       | .5                 | 12.6 | 29.2  | 9.4   | .7    | .0  |      | 52.4      | 15.6     |          | 53.0       | 41.2  | 52.3  | 56.2  | 50.8  | 42.8  | 50.5  | 57.5  |
| E        | .1                 | 1.1  | 1.3   | .3    | *     | .0  |      | 2.8       | 13.0     |          | 2.8        | 1.9   | 2.3   | 3.4   | 2.9   | 2.1   | 2.7   | 2.9   |
| SE       | *                  | .3   | .1    | .0    | .0    | .0  |      | .3        | 7.9      |          | .3         | .0    | .3    | .5    | .4    | .0    | .3    | .6    |
| S        | *                  | .2   | .1    | *     | .0    | .0  |      | .4        | 9.2      |          | .4         | .0    | .4    | .4    | .4    | .0    | .5    | .1    |
| SW       | .1                 | .3   | .1    | .0    | .0    | .0  |      | .4        | 7.5      |          | .3         | .0    | .5    | .3    | .7    | .0    | .3    | .2    |
| W        | .1                 | .5   | .1    | *     | .0    | .0  |      | .8        | 6.9      |          | 1.1        | 1.1   | .8    | .6    | .8    | 1.2   | .5    | .9    |
| NW       | .2                 | 1.9  | .9    | .1    | .0    | .0  |      | 3.2       | 9.7      |          | 2.7        | 2.7   | 3.0   | 3.1   | 3.4   | 1.8   | 3.6   | 3.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .7                 |      |       |       |       |     |      | .7        | .0       |          | 1.0        | 1.1   | .5    | 1.3   | .8    | .0    | .5    | .6    |
| TOT OBS  | 189                | 2225 | 4104  | 1126  | 71    | 0   | 7715 |           | 14.5     |          | 1542       | 94    | 1541  | 703   | 1452  | 83    | 1528  | 772   |
| TOT PCT  | 2.4                | 28.8 | 53.2  | 14.6  | .9    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 03    | 06    | 18    |
| N        | 3.8                | 22.3 | 11.6  | 1.3   | *   | 39.0      | 14.1     |          | 39.2       | 38.2  | 40.5  | 38.7  |
| NE       | 3.5                | 25.7 | 20.2  | 2.9   | *   | 52.4      | 15.6     |          | 52.3       | 53.5  | 50.4  | 52.9  |
| E        | .4                 | 1.6  | .7    | .1    | .0  | 2.8       | 13.0     |          | 2.7        | 2.7   | 2.9   | 2.8   |
| SE       | .2                 | .1   | *     | .0    | .0  | .3        | 7.9      |          | .3         | .3    | .3    | .4    |
| S        | .1                 | .2   | *     | .0    | .0  | .4        | 9.2      |          | .4         | .4    | .4    | .3    |
| SW       | .2                 | .2   | *     | .0    | .0  | .4        | 7.5      |          | .2         | .4    | .7    | .3    |
| W        | .5                 | .3   | *     | .0    | .0  | .8        | 6.9      |          | 1.1        | .8    | .8    | .6    |
| NW       | 1.0                | 1.8  | .3    | *     | .0  | 3.2       | 9.7      |          | 2.7        | 3.0   | 3.3   | 3.5   |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | .7                 |      |       |       |     | .7        | .0       |          | 1.0        | .8    | .7    | .5    |
| TOT OBS  | 803                | 4024 | 2547  | 337   | 4   | 7715      |          |          | 1636       | 2244  | 1535  | 2300  |
| TOT PCT  | 10.4               | 52.2 | 33.0  | 4.4   | .1  | 100.0     | 14.5     |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

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28.0N 15.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00603 | 1.0  | 2.1 | 29.0 | 53.0               | 13.6  | 1.2   | .0  | 14.4  | 100.0    | 1636      |
| 06609 | .8   | 1.8 | 32.1 | 49.3               | 15.2  | .8    | .0  | 14.3  | 100.0    | 2244      |
| 12615 | .7   | 1.5 | 27.6 | 54.7               | 14.8  | .7    | .0  | 14.6  | 100.0    | 1535      |
| 18621 | .5   | 1.5 | 26.3 | 56.1               | 14.6  | 1.0   | .0  | 14.7  | 100.0    | 2300      |
| TOT   | .7   | 1.3 | 22.2 | 41.0               | 11.2  | .7    | .0  | 14.5  |          | 7715      |
| PCT   | .7   | 1.7 | 28.8 | 53.2               | 14.6  | .9    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
|          |      |      |      |           |           |                  |
| N        | 21.8 | 8.0  | 13.1 | 5.5       |           | 3.4              |
| NE       | 21.5 | 7.2  | 9.8  | 4.2       |           | 3.0              |
| E        | .9   | .2   | .4   | .1        |           | 2.4              |
| SE       | .1   | .1   | .1   | .1        |           | 3.6              |
| S        | .3   | .1   | .1   | .1        |           | 3.3              |
| SW       | .2   | .1   | .1   | .1        |           | 2.8              |
| W        | .4   | .3   | .2   | .1        |           | 3.4              |
| NW       | 2.2  | .7   | .7   | .4        |           | 2.9              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | .6   | .1   | .1   | .1        |           | 1.5              |
| TOT OBS  | 1461 | 514  | 746  | 321       | 3042      | 3.2              |
| TOT PCT  | 48.0 | 16.9 | 24.5 | 10.6      | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT) NH >4/8  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .2  | .3  | .3  | 1.8 | 6.1  | 4.9  | 1.4  | .3   | .3   | .5    | 32.6            |           |
| NE      | .1  | .0  | .2  | 1.3 | 4.7  | 3.2  | 1.3  | .3   | .2   | .5    | 31.0            |           |
| E       | .0  | .0  | .0  | .1  | .1   | .1   | .0   | .0   | .0   | .1    | 1.2             |           |
| SE      | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .2              |           |
| S       | .0  | .0  | .0  | .0  | .0   | .1   | .1   | .0   | .0   | .1    | .4              |           |
| SW      | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .7              |           |
| W       | .0  | .0  | .0  | .1  | .1   | .1   | .0   | .0   | .0   | .0    | .7              |           |
| NW      | .0  | .0  | .0  | .3  | .3   | .1   | .1   | .0   | .0   | .0    | 3.0             |           |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM    | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .7              |           |
| TOT OBS | 9   | 1   | 15  | 100 | 348  | 266  | 91   | 20   | 15   | 36    | 2141            | 3042      |
| TOT PCT | .3  | .0  | .5  | 3.3 | 11.4 | 8.7  | 3.0  | .7   | .5   | 1.2   | 70.4            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | 1.1       | 1.6  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7   | 1.7  |
| >5000          | 1.7       | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3   | 2.3  |
| >3500          | 4.0       | 5.1  | 5.4  | 5.4  | 5.4  | 5.4  | 5.4   | 5.4  |
| >2000          | 10.3      | 13.4 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1  | 14.1 |
| >1000          | 18.8      | 24.3 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5  | 25.5 |
| >600           | 20.9      | 27.6 | 28.9 | 28.9 | 28.9 | 28.9 | 28.9  | 28.9 |
| >300           | 21.1      | 28.0 | 29.4 | 29.4 | 29.4 | 29.4 | 29.4  | 29.4 |
| >150           | 21.1      | 28.0 | 29.4 | 29.4 | 29.4 | 29.4 | 29.4  | 29.4 |
| >0             | 21.2      | 28.2 | 29.7 | 29.7 | 29.7 | 29.7 | 29.7  | 29.7 |
| TOTAL          | 648       | 864  | 909  | 909  | 909  | 909  | 909   | 909  |

TOTAL NUMBER OF OBS: 3063

PCT FREQ NH <5/8: 70.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL OBS |
|------|------|------|------|-----|-----|-----|-----|---------|-----------|
| 29.1 | 12.0 | 11.7 | 10.4 | 6.5 | 5.6 | 7.4 | 8.6 | 8.5     | 3219      |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | 1.2  | 1.0  | .1  | .0 | *  | *  | .1  | .1  | .0  | .0   | 2.4   |              |
|              | TOT %  | 1.2  | 1.0  | .1  | .0 | *  | *  | .1  | .1  | .0  | .0   | 2.4   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .4   | .5   | *   | .0 | .0 | .0 | .0  | *   | .0  | *    | 1.0   |              |
|              | TOT %  | .4   | .5   | *   | .0 | .0 | .0 | .0  | *   | .0  | *    | 1.0   |              |
| 2<5          | PCP    | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | 1.3  | 1.0  | .0  | .0 | .0 | .0 | *   | .1  | .0  | .1   | 2.5   |              |
|              | TOT %  | 1.3  | 1.0  | .0  | .0 | .0 | .0 | *   | .1  | .0  | .1   | 2.6   |              |
| 5<10         | PCP    | .1   | .1   | .0  | *  | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
|              | NO PCP | 12.2 | 12.8 | .5  | .1 | .2 | .2 | .3  | .8  | .0  | .2   | 27.3  |              |
|              | TOT %  | 12.3 | 12.9 | .5  | .1 | .2 | .2 | .3  | .8  | .0  | .2   | 27.5  |              |
| 10+          | PCP    | *    | *    | .0  | .0 | .0 | .0 | *   | *   | .0  | .0   | .1    |              |
|              | NO PCP | 32.1 | 28.5 | 1.2 | .2 | .4 | .3 | .6  | 2.7 | .0  | .4   | 66.4  |              |
|              | TOT %  | 32.2 | 28.5 | 1.2 | .2 | .4 | .3 | .6  | 2.7 | .0  | .4   | 66.6  |              |
| TOT OBS      |        | 47.4 | 43.9 | 1.8 | .3 | .6 | .6 | 1.0 | 3.7 | .0  | .8   | 100.0 | 3803         |
| TOT PCT      |        |      |      |     |    |    |    |     |     |     |      |       |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | TOT %      | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | *   | .0 | *  | *  | *  | *   | .0  | .0   | .4    |              |
|              | 11-21      | .5   | .4   | .0  | .0 | .0 | .0 | *  | *   | .0  | .0   | .9    |              |
|              | 22+        | .2   | .2   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .5    |              |
|              | TOT %      | .9   | .7   | *   | .0 | *  | *  | *  | .1  | .0  | .0   | 1.7   |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 4-10       | .1   | .1   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2    |              |
|              | 11-21      | .2   | .3   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .4    |              |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2    |              |
|              | TOT %      | .3   | .5   | *   | .0 | .0 | .0 | .0 | *   | .0  | *    | .8    |              |
| 2<5          | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .1   | .1    |              |
|              | 4-10       | .3   | .4   | *   | .0 | .0 | .0 | *  | *   | .0  | .0   | .8    |              |
|              | 11-21      | .8   | .8   | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.7   |              |
|              | 22+        | .3   | .5   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .7    |              |
|              | TOT %      | 1.4  | 1.6  | *   | .0 | .0 | .0 | *  | .1  | .0  | .1   | 3.2   |              |
| 5<10         | 0-3        | .1   | .1   | *   | .0 | .0 | *  | .1 | .1  | .0  | .2   | .6    |              |
|              | 4-10       | 3.3  | 2.7  | .2  | .1 | .1 | .1 | .2 | .3  | .0  | .0   | 6.8   |              |
|              | 11-21      | 5.9  | 7.0  | .3  | *  | .1 | *  | .1 | .2  | .0  | .0   | 13.5  |              |
|              | 22+        | 1.7  | 2.8  | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | 4.6   |              |
|              | TOT %      | 11.0 | 12.6 | .5  | .1 | .1 | .1 | .3 | .7  | .0  | .2   | 25.5  |              |
| 10+          | 0-3        | .4   | .3   | *   | *  | *  | *  | .1 | .1  | .0  | .5   | 1.5   |              |
|              | 4-10       | 8.9  | 8.0  | .5  | .1 | .2 | .2 | .4 | 1.5 | .0  | .0   | 19.8  |              |
|              | 11-21      | 17.6 | 19.9 | .8  | *  | .1 | .1 | .1 | .7  | .0  | .0   | 39.1  |              |
|              | 22+        | 3.3  | 4.8  | .1  | .0 | .0 | .0 | *  | .1  | .0  | .0   | 8.2   |              |
|              | TOT %      | 30.2 | 32.9 | 1.4 | .2 | .3 | .3 | .5 | 2.4 | .0  | .5   | 68.7  |              |
| TOT OBS      |            | 43.7 | 48.3 | 2.0 | .2 | .4 | .4 | .8 | 3.3 | .0  | .8   | 100.0 | 5382         |
| TOT PCT      |            |      |      |     |    |    |    |    |     |     |      |       |              |

## AUGUST

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+     | TOTAL       | NH <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-----------|-------------|--------------------|---------------|
| 00603          | .6         | .0         | .4         | 3.7        | 9.9          | 8.0          | 2.6          | .3           | .3           | .4        | 26.1        | 73.9               | 727           |
| 06609          | .5         | .1         | .6         | 4.9        | 16.3         | 12.7         | 4.3          | 1.0          | .6           | .8        | 41.9        | 58.1               | 774           |
| 12615          | .1         | .0         | .2         | 3.2        | 10.9         | 8.0          | 2.6          | .7           | 1.0          | 1.2       | 27.9        | 72.1               | 823           |
| 18621          | .0         | .0         | .6         | 1.6        | 7.5          | 5.8          | 2.4          | .5           | .0           | 2.0       | 20.3        | 79.7               | 831           |
| TOT<br>PCT     | 9<br>.3    | 1<br>*     | 15<br>.5   | 104<br>3.3 | 350<br>11.1  | 270<br>8.6   | 93<br>2.9    | 20<br>.6     | 15<br>.5     | 36<br>1.1 | 913<br>28.9 | 2242<br>71.1       | 3155<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2   | 1/2<1     | 1<2      | 2<5        | 5<10         | 10+          | TOTAL<br>OBS  |
|----------------|--------|-----------|----------|------------|--------------|--------------|---------------|
| 00603          | .0     | .9        | .2       | 3.3        | 23.3         | 72.3         | 1213          |
| 06609          | .1     | 2.3       | .9       | 2.7        | 28.6         | 65.5         | 1505          |
| 12615          | .0     | 1.7       | 1.3      | 3.6        | 23.0         | 70.5         | 1209          |
| 18621          | .0     | 1.9       | .8       | 3.4        | 27.2         | 66.7         | 1518          |
| TOT<br>PCT     | 1<br>* | 94<br>1.7 | 43<br>.8 | 175<br>3.2 | 1404<br>25.8 | 3728<br>68.5 | 5445<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|---------------|------------|-------------|-----------------|-------------------|---------------|
| 00603          | .6            | 1.0        | 8.1         | 20.7            | 71.2              | 704           |
| 06609          | .5            | 1.5        | 8.8         | 35.2            | 56.0              | 752           |
| 12615          | .1            | .4         | 6.1         | 23.4            | 70.5              | 800           |
| 18621          | .0            | .6         | 4.5         | 18.0            | 77.6              | 807           |
| TOT<br>PCT     | 9<br>.3       | 26<br>.8   | 208<br>6.8  | 743<br>24.3     | 2112<br>69.0      | 3063<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .1    | .1    | .0    | .0     | 3            | .1          |
| 80/84  | .0   | .0    | .0    | .1    | .5    | .6    | .1    | .1     | 43           | 1.4         |
| 75/79  | .0   | .0    | .0    | .5    | 2.3   | 7.7   | 4.3   | 1.4    | 485          | 16.2        |
| 70/74  | .0   | .0    | .0    | .0    | 2.4   | 21.1  | 37.5  | 15.8   | 2299         | 76.8        |
| 65/69  | .0   | .0    | .0    | .0    | .1    | .5    | 3.0   | 1.7    | 161          | 5.4         |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| TOTAL  | 0    | 0     | 1     | 19    | 160   | 898   | 1345  | 569    | 2992         | 100.0       |
| PCT    | .0   | .0    | *     | .6    | 5.3   | 30.0  | 45.0  | 19.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|-------|------|------|-----|----|----|----|----|-----|-----|------|
| 85/89 | .1   | *    | .0  | *  | .0 | .0 | .0 | .0  | .0  | .0   |
| 80/84 | .8   | .5   | .0  | .0 | .1 | *  | *  | .1  | .0  | .0   |
| 75/79 | 7.9  | 6.5  | .3  | .1 | .2 | .2 | .3 | .7  | .0  | .2   |
| 70/74 | 35.7 | 35.0 | 1.3 | .1 | .4 | .2 | .6 | 2.6 | .0  | .4   |
| 65/69 | 2.9  | 2.1  | .1  | *  | *  | *  | *  | .2  | .0  | .0   |
| 60/64 | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| TOTAL | 47.3 | 44.7 | 1.6 | .3 | .6 | .4 | .9 | 3.6 | .0  | .6   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00603          | 87  | 76  | 74  | 71  | 69 | 67 | 59  | 71.3 | 1639         |
| 06609          | 85  | 77  | 75  | 71  | 68 | 67 | 59  | 71.4 | 2245         |
| 12615          | 86  | 82  | 79  | 74  | 71 | 68 | 62  | 74.4 | 1503         |
| 18621          | 87  | 82  | 79  | 73  | 70 | 68 | 61  | 73.6 | 2257         |
| TOT            | 87  | 81  | 78  | 72  | 69 | 67 | 59  | 72.6 | 7644         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00603          | .0   | .0    | 2.1   | 18.3  | 53.2  | 26.3   | 85   | 725          |
| 06609          | .0   | .5    | 4.1   | 23.5  | 48.3  | 23.6   | 83   | 762          |
| 12615          | .0   | 1.6   | 9.8   | 42.9  | 36.4  | 9.3    | 79   | 742          |
| 18621          | .0   | .5    | 5.1   | 35.3  | 42.3  | 16.8   | 82   | 799          |
| TOT            | 0    | 20    | 160   | 912   | 1362  | 574    | 82   | 3028         |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1954-1973

AUGUST

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | M<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | .1       | *        | 5     | *        | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .2       | .3       | .1       | 18    | .0       | .5        |
| 9/10               | .0       | .0       | .0       | .1       | .5       | 1.3      | .5       | *        | 26    | .0       | .7        |
| 7/8                | .0       | .0       | .0       | .1       | .5       | .6       | .1       | .0       | 80    | .1       | 2.2       |
| 6                  | .0       | .0       | .0       | .1       | .5       | .6       | .1       | .0       | 45    | .1       | 1.2       |
| 5                  | .0       | .0       | .0       | .3       | 2.2      | 1.6      | .2       | .0       | 148   | .2       | 4.1       |
| 4                  | .0       | .0       | .1       | 1.0      | 3.5      | .9       | .0       | .0       | 194   | .3       | 5.3       |
| 3                  | .0       | .0       | .1       | 1.6      | 5.5      | .6       | .0       | .0       | 267   | .4       | 7.3       |
| 2                  | .0       | .0       | .2       | 4.8      | 7.4      | .4       | *        | .0       | 446   | .6       | 12.2      |
| 1                  | .0       | .0       | .1       | 9.2      | 8.4      | .1       | .0       | .0       | 622   | .6       | 17.3      |
| 0                  | .0       | .0       | .2       | 14.7     | 6.7      | .1       | *        | .0       | 756   | .5       | 21.2      |
| -1                 | .0       | .0       | .3       | 10.9     | 2.6      | .2       | .0       | .0       | 484   | .5       | 13.4      |
| -2                 | .0       | .0       | .4       | 3.9      | .9       | .1       | .0       | .0       | 186   | .3       | 5.1       |
| -3                 | .0       | .0       | .2       | 1.6      | .4       | .0       | .0       | .0       | 80    | .1       | 2.2       |
| -4                 | .0       | .0       | .3       | 1.1      | .2       | *        | .0       | .0       | 56    | *        | 1.6       |
| -5                 | .0       | .2       | .1       | .5       | *        | .0       | .0       | .0       | 27    | *        | .7        |
| -6                 | .0       | .1       | .1       | .2       | *        | .0       | .0       | .0       | 17    | .0       | .5        |
| -7/-8              | .0       | .1       | .0       | .1       | .0       | .0       | .0       | .0       | 8     | *        | .2        |
| -9/-10             | .0       | .2       | *        | *        | .0       | .0       | .0       | .0       | 8     | .0       | .2        |
| -11/-13            | .1       | .0       | .1       | .1       | .0       | .0       | .0       | .0       | 6     | .0       | .2        |
| TOTAL              | 2        | 22       | 78       | 1745     | 1358     | 215      | 51       | 8        | 3479  | 131      | 3348      |
| PCT                | .1       | .6       | 2.2      | 50.2     | 39.0     | 6.2      | 1.5      | .2       | 100.0 | 3.8      | 96.2      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| MGT     | N   |      |       |       |       |     |      |  | NE  |      |       |       |       |     |      |  |
|---------|-----|------|-------|-------|-------|-----|------|--|-----|------|-------|-------|-------|-----|------|--|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |
| <1      | .1  | 1.4  | .2    | .0    | .0    | .0  | 1.7  |  | .1  | .7   | .1    | .0    | .0    | .0  | .9   |  |
| 1-2     | .2  | 8.1  | 5.1   | .0    | .0    | .0  | 13.4 |  | .1  | 4.7  | 4.0   | .0    | .0    | .0  | 8.8  |  |
| 3-4     | .0  | 3.7  | 11.3  | .8    | .0    | .0  | 16.0 |  | *   | 2.4  | 10.2  | .8    | .0    | .0  | 13.5 |  |
| 5-6     | .0  | 1.0  | 8.2   | 1.9   | .0    | .0  | 11.1 |  | .0  | .8   | 8.0   | 1.2   | .0    | .0  | 10.0 |  |
| 7       | .0  | .1   | 3.3   | 1.4   | *     | .0  | 4.9  |  | .0  | .1   | 3.6   | 1.8   | .1    | .0  | 5.6  |  |
| 8-9     | .0  | .0   | 1.2   | .9    | .0    | .0  | 2.1  |  | .0  | *    | 1.1   | .6    | .0    | .0  | 1.8  |  |
| 10-11   | .0  | .0   | .2    | .6    | .1    | .0  | .9   |  | .0  | .0   | .3    | .4    | *     | .0  | .7   |  |
| 12      | .0  | .0   | .1    | .4    | *     | .0  | .6   |  | .0  | .0   | .3    | .2    | *     | .0  | .6   |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .1    | .0    | .0    | .0  | .1   |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 20-22   | .0  | .0   | .0    | .0    | *     | .0  | *    |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| TOT PCT | .3  | 14.2 | 29.9  | 6.0   | .2    | .0  | 50.7 |  | .2  | 8.8  | 27.8  | 5.1   | .2    | .0  | 42.1 |  |

| MGT     | E   |      |       |       |       |     |     |  | SE  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|--|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | *    | .0    | .0    | .0    | .0  | *   |  |
| 1-2     | .1  | .2   | .1    | .0    | .0    | .0  | .4  |  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |  |
| 3-4     | .0  | *    | .3    | *     | .0    | .0  | .4  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .2  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .1  | .3   | .8    | *     | .0    | .0  | 1.3 |  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |  |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .2  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .1   | .1    | .0    | .0    | .0  | .3  | .0  | .3   | .1    | .0    | .0    | .0  | .4  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .1  | .2   | .0    | .0    | .0    | .0  | .3  |           |
| 1-2     | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .1  | 1.5  | .2    | .0    | .0    | .0  | 1.8 |           |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .4   | .2    | .0    | .0    | .0  | .5  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .3    | .2    | .0    | .0  | .8  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .0  | .5   | .1    | .0    | .0    | .0  | .7  | .2  | 2.2  | .8    | .2    | .0    | .0  | 3.5 | 99.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.5 | 2.6  | .3    | .0    | .0    | .0  | 4.4   |         |
| 1-2     | .6  | 15.3 | 9.5   | .0    | .0    | .0  | 25.4  |         |
| 3-4     | .0  | 6.5  | 22.4  | 1.7   | .0    | .0  | 30.6  |         |
| 5-6     | .0  | 1.9  | 16.8  | 3.3   | .0    | .0  | 22.0  |         |
| 7       | .0  | .3   | 7.2   | 3.2   | .1    | .0  | 10.8  |         |
| 8-9     | .0  | .0   | 2.3   | 1.5   | .0    | .0  | 3.9   |         |
| 10-11   | .0  | .0   | .5    | 1.0   | .1    | .0  | 1.6   |         |
| 12      | .0  | .0   | .4    | .6    | .1    | .0  | 1.1   |         |
| 13-16   | .0  | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.1 | 26.7 | 59.5  | 11.3  | .4    | .0  | 100.0 | 2022    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .6  | 8.7  | 12.3 | 9.6  | 4.7  | 1.2  | .6    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 927   | 4        |
| 6-7          | .0  | .8   | 5.9  | 8.3  | 6.0  | 2.7  | .9    | .7  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 623   | 6        |
| 8-9          | .0  | .3   | 1.4  | 3.2  | 2.3  | 1.9  | .9    | .5  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 263   | 8        |
| 10-11        | .0  | .7   | .4   | .9   | .5   | .5   | .5    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 91    | 6        |
| 12-13        | .0  | .0   | .6   | .2   | .2   | .1   | .0    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 33    | 6        |
| >13          | .0  | .0   | .0   | .2   | .2   | .0   | .1    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 14    | 8        |
| INDET        | 1.1 | 4.2  | 4.9  | 3.9  | 3.7  | 1.1  | .8    | .4  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 493   | 5        |
| TOTAL        | 4.3 | 24.0 | 25.6 | 24.1 | 24.1 | 18.6 | 9.4   | 5.1 | 1.5   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2448  |          |
| PCT          | 1.8 | 14.7 | 25.6 | 26.2 | 17.6 | 7.6  | 3.8   | 2.1 | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

SEPTEMBER

PERIOD: (PRIMARY) 1919-1973  
(OVER-ALL) 1894-1973

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| N                  | .5   | .2        | .3   | .0        | .0   | .0              | .0   | .9              | .2             | .6                      | 1.8         | .0                  | 3.1        | .1              | 93.2       |
| NE                 | .4   | .2        | .2   | .0        | .0   | .0              | .0   | .8              | .5             | .3                      | 1.1         | .0                  | 3.2        | .0              | 94.1       |
| E                  | 2.2  | .0        | .0   | .0        | .0   | .0              | .0   | 2.2             | .7             | 1.8                     | 3.1         | .0                  | 1.8        | .0              | 90.5       |
| SE                 | 4.3  | .0        | .0   | .0        | .0   | .0              | .0   | 4.3             | 3.6            | 2.9                     | 1.4         | .0                  | .0         | .0              | 87.7       |
| S                  | 2.3  | .0        | .0   | .0        | .0   | .0              | .0   | 2.3             | 2.3            | 1.1                     | 1.1         | .0                  | .0         | .0              | 93.1       |
| SW                 | .0   | 3.8       | .0   | .0        | .0   | .0              | .0   | 3.8             | .0             | 1.0                     | .0          | .0                  | .0         | .0              | 95.2       |
| W                  | .0   | .8        | .0   | .0        | .0   | .0              | .0   | .8              | 5.7            | .0                      | .0          | .0                  | .0         | .0              | 93.6       |
| NW                 | .4   | .3        | .0   | .0        | .0   | .0              | .0   | .7              | .9             | .6                      | .3          | .0                  | 1.9        | .1              | 95.5       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | 1.0  | .0        | .0   | .0        | .0   | .0              | .0   | 1.0             | .0             | 1.0                     | 2.0         | .0                  | .0         | .0              | 96.0       |
| TOT PCT            | .6   | .3        | .2   | .0        | .0   | .0              | .0   | 1.0             | .6             | .5                      | 1.4         | .0                  | 2.7        | .1              | 93.8       |
| TOT OBS:           | 3329 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                    |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|--------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG<br>WEA |
| 00003         | .4                 | .1           | .1   | .0           | .0   | .0                    | .0   | .6                      | .4                | 1.0          | .9                | .0                        | 1.9           | .0                 | 95.1             |
| 06009         | .6                 | .3           | .5   | .0           | .0   | .0                    | .0   | 1.4                     | .2                | .9           | 1.7               | .0                        | 1.3           | .0                 | 94.5             |
| 12015         | .5                 | .3           | .1   | .0           | .0   | .0                    | .0   | .9                      | .9                | .0           | 1.5               | .0                        | 2.9           | .1                 | 93.6             |
| 18021         | .8                 | .2           | .0   | .0           | .0   | .0                    | .0   | 1.0                     | .6                | .2           | 1.3               | .0                        | 4.5           | .1                 | 92.4             |
| TOT PCT       | .6                 | .3           | .2   | .0           | .0   | .0                    | .0   | 1.0                     | .6                | .5           | 1.4               | .0                        | 2.7           | .1                 | 93.8             |
| TOT OBS:      | 3433               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                    |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |  |
|----------|--------------------|------|-------|-------|-------|----|------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |  |
| N        | 1.7                | 14.6 | 12.7  | 1.7   | .1    | .0 |      | 30.6  | 11.2         | 31.2        | 37.8        | 20.0       | 29.4  | 30.0  | 39.7  | 32.9  | 26.6  |  |
| NE       | 1.4                | 20.0 | 24.8  | 3.6   | .1    | .0 |      | 50.0  | 12.5         | 50.6        | 46.6        | 49.9       | 49.2  | 50.7  | 52.6  | 48.4  | 51.4  |  |
| E        | .4                 | 2.6  | 1.6   | .1    | .0    | .0 |      | 4.7   | 9.6          | 4.5         | 2.8         | 4.7        | 5.9   | 5.2   | 1.0   | 4.1   | 4.9   |  |
| SE       | .2                 | .8   | .2    | .0    | .0    | .0 |      | 1.2   | 6.8          | .9          | .0          | 1.7        | 1.7   | .9    | 1.3   | 1.2   | 1.2   |  |
| S        | .4                 | .6   | .1    | .0    | .0    | .0 |      | 1.2   | 6.0          | 1.3         | 2.2         | 1.2        | 1.4   | 1.4   | 1.3   | .6    | 1.6   |  |
| SW       | .4                 | 1.1  | .4    | .0    | .0    | .0 |      | 1.9   | 7.5          | 1.5         | 1.9         | 1.9        | 1.9   | 1.8   | 1.3   | 2.2   | 2.8   |  |
| W        | .5                 | 1.4  | .3    | .0    | .0    | .0 |      | 2.3   | 6.6          | 2.0         | 4.4         | 2.3        | 2.5   | 1.8   | .0    | 2.4   | 3.4   |  |
| NW       | .6                 | 3.1  | 1.0   | .1    | .0    | .0 |      | 4.8   | 8.0          | 4.3         | 1.9         | 4.3        | 6.0   | 5.1   | 1.6   | 5.4   | 4.4   |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 3.2                |      |       |       |       |    |      | 3.2   | .0           | 3.7         | 2.5         | 3.9        | 2.0   | 3.1   | 1.3   | 2.8   | 3.7   |  |
| TOT OBS  | 616                | 3064 | 2845  | 388   | 13    | 0  | 6926 |       | 10.9         | 1332        | 80          | 1399       | 641   | 1326  | 78    | 1371  | 679   |  |
| TOT PCT  | 8.9                | 44.2 | 41.1  | 5.6   | .2    | .0 |      | 100.0 |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |       | 41+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |  |  |
|----------|------|--------------------|-------|-------|-------|------|-----------|----------|----------|------------|-------|-------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00 03 |      |           |          |          | 06 09      | 12 13 | 18 21 |  |  |
| N        | 7.2  | 17.7               | 5.4   | .3    | .0    | 30.6 | 11.2      | 31.6     | 29.8     | 30.5       | 30.8  |       |  |  |
| NE       | 7.7  | 29.9               | 11.5  | .8    | .0    | 50.0 | 12.5      | 50.4     | 49.7     | 50.8       | 49.4  |       |  |  |
| E        | 1.7  | 2.4                | .6    | .0    | .0    | 4.7  | 9.6       | 4.4      | 5.1      | 4.9        | 4.3   |       |  |  |
| SE       | .8   | .4                 | .1    | .0    | .0    | 1.2  | 6.8       | .9       | 1.7      | .9         | 1.2   |       |  |  |
| S        | .9   | .2                 | .1    | .0    | .0    | 1.2  | 6.0       | 1.3      | 1.3      | 1.4        | 1.0   |       |  |  |
| SW       | 1.1  | .7                 | .2    | .0    | .0    | 1.9  | 7.5       | 1.6      | 1.9      | 1.8        | 2.4   |       |  |  |
| W        | 1.4  | .6                 | .1    | .0    | .0    | 2.3  | 6.6       | 2.1      | 2.4      | 1.7        | 2.7   |       |  |  |
| NW       | 2.2  | 2.4                | .3    | .0    | .0    | 4.8  | 8.0       | 4.1      | 4.9      | 5.0        | 5.1   |       |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0    | .0   | .0        | .0       | .0       | .0         | .0    |       |  |  |
| CALM     | 3.2  |                    |       |       |       | 3.2  | .0        | 3.6      | 3.3      | 3.0        | 3.1   |       |  |  |
| TOT OBS  | 1816 | 3771               | 1256  | 83    | 0     | 6926 |           | 1432     | 2040     | 1404       | 2050  |       |  |  |
| TOT PCT  | 26.2 | 54.4               | 18.1  | 1.2   | .0    |      | 100.0     | 100.0    | 100.0    | 100.0      | 100.0 |       |  |  |



PERIOD: (PRIMARY) 1919-1973  
(OVER-ALL) 1854-1973

# SEPTEMBER

AREA 0004 CANARY ISLANDS  
28.0N 13.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000 | 3.6  | 4.9 | 44.0 | 41.1               | 6.4   | .1    | .0  | 11.1 | 100.0    | 1432      |
| 0600 | 3.3  | 6.2 | 47.6 | 37.9               | 4.9   | .1    | .0  | 10.5 | 100.0    | 2040      |
| 1200 | 3.0  | 6.2 | 39.7 | 44.2               | 6.6   | .4    | .0  | 11.4 | 100.0    | 1404      |
| 1800 | 3.1  | 5.3 | 44.1 | 42.1               | 5.1   | .2    | .0  | 11.0 | 100.0    | 2050      |
| TOT  | 224  | 392 | 3064 | 2845               | 388   | 13    | 0   | 10.9 |          | 6926      |
| PCT  | 3.2  | 5.7 | 44.2 | 41.1               | 5.6   | .2    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 16.0 | 8.9  | 8.1  | 2.8          |              | 3.2                    |
| NE       | 23.6 | 9.9  | 11.1 | 3.4          |              | 3.1                    |
| E        | 1.2  | .4   | .8   | .3           |              | 3.7                    |
| SE       | .4   | .1   | .3   | .2           |              | 4.1                    |
| S        | .5   | .2   | .3   | .1           |              | 3.2                    |
| SW       | .7   | .3   | .3   | .2           |              | 3.3                    |
| W        | .9   | .7   | .4   | .1           |              | 2.8                    |
| NW       | 2.5  | .9   | 1.2  | .3           |              | 2.9                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 2.1  | .4   | .3   | .2           |              | 1.9                    |
| TOT OBS  | 1275 | 582  | 605  | 198          | 2660         | 3.1                    |
| TOT PCT  | 47.9 | 21.9 | 22.7 | 7.4          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .1  | *   | .1  | .8  | 3.4  | 2.3  | .7   | .3   | .2   | .3    | 27.5    |       |
| *   | .0  | .3  | 1.3 | 3.6  | 3.4  | 1.3  | .4   | .1   | .3    | 37.2    |       |
| .0  | .0  | *   | .1  | .2   | .3   | .1   | .1   | .0   | *     | 2.0     |       |
| .0  | .0  | .0  | *   | .1   | .1   | .1   | .0   | *    | .0    | .5      |       |
| .0  | .0  | .1  | *   | *    | *    | .1   | .0   | .0   | .0    | .8      |       |
| .0  | .0  | .1  | *   | .1   | .1   | *    | .0   | .0   | .0    | 1.2     |       |
| .0  | .0  | .0  | *   | *    | *    | .2   | .1   | .0   | .0    | 1.8     |       |
| .0  | .0  | *   | *   | .3   | .5   | .1   | *    | .0   | .0    | 3.9     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .1  | .1   | .1   | *    | .0   | .0   | *     | 2.7     |       |
| 3   | 1   | 14  | 64  | 211  | 184  | 68   | 24   | 10   | 19    | 2062    |       |
| .1  | *   | .5  | 2.4 | 7.9  | 6.9  | 2.6  | .9   | .4   | .7    | 77.5    |       |
|     |     |     |     |      |      |      |      |      |       | 2660    |       |
|     |     |     |     |      |      |      |      |      |       | 100.0   |       |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING<br>(FEET) | VSBY (NH)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.1        | 1.1        | 1.1        | 1.1          | 1.1          | 1.1           | 1.1        |
| = OR >5000        | 1.6         | 2.0        | 2.0        | 2.0        | 2.0          | 2.0          | 2.0           | 2.0        |
| = OR >3500        | 3.6         | 4.5        | 4.5        | 4.5        | 4.5          | 4.5          | 4.5           | 4.5        |
| = OR >2000        | 9.1         | 11.0       | 11.4       | 11.4       | 11.4         | 11.4         | 11.4          | 11.4       |
| = OR >1000        | 15.1        | 18.7       | 19.2       | 19.2       | 19.2         | 19.2         | 19.2          | 19.2       |
| = OR >600         | 16.9        | 21.0       | 21.5       | 21.5       | 21.5         | 21.5         | 21.5          | 21.6       |
| = OR >300         | 17.2        | 21.5       | 22.0       | 22.0       | 22.0         | 22.0         | 22.0          | 22.1       |
| = OR >150         | 17.2        | 21.6       | 22.1       | 22.1       | 22.1         | 22.1         | 22.1          | 22.2       |
| = OR >0           | 17.2        | 21.6       | 22.2       | 22.2       | 22.2         | 22.2         | 22.2          | 22.3       |
| TOTAL             | 467         | 586        | 601        | 601        | 601          | 603          | 603           | 604        |

TOTAL NUMBER OF OBS: 2713

PCT FREQ NH <5/8: 77.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|---------|--------------|
| 22.1 | 17.4 | 16.6 | 13.3 | 7.6 | 5.3 | 6.4 | 5.1 | 5.9     | 2877         |



## SEPTEMBER

PERIOD: (PRIMARY) 1919-1973  
(OVER-ALL) 1854-1973AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %  | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | *   | *   | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .2   | .3   | .1  | *   | *   | .0  | .0  | *   | .0  | .0   | .7    |              |
|              | TOT %  | .2   | .3   | .1  | *   | *   | .0  | .0  | *   | .0  | .0   | .7    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .3   | .6   | *   | .0  | .0  | .0  | .0  | .1  | .0  | .0   | .9    |              |
|              | TOT %  | .3   | .6   | *   | .0  | .0  | .0  | .0  | .1  | .0  | .0   | .9    |              |
| 2<5          | PCP    | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | NO PCP | .5   | .5   | .0  | *   | *   | *   | *   | *   | .0  | .1   | 1.2   |              |
|              | TOT %  | .6   | .5   | .0  | *   | *   | *   | *   | *   | .0  | .1   | 1.3   |              |
| 5<10         | PCP    | .1   | .2   | .0  | .0  | .0  | .1  | .0  | .0  | .0  | *    | .4    |              |
|              | NO PCP | 6.6  | 10.4 | 1.0 | .2  | .3  | .4  | .3  | .9  | .0  | .4   | 20.6  |              |
|              | TOT %  | 6.7  | 10.6 | 1.0 | .2  | .3  | .5  | .3  | .9  | .0  | .4   | 21.0  |              |
| 10+          | PCP    | .2   | .2   | .1  | *   | *   | .0  | *   | *   | .0  | .0   | .6    |              |
|              | NO PCP | 26.9 | 35.4 | 2.2 | .7  | .9  | 1.1 | 1.7 | 4.1 | .0  | 2.5  | 75.4  |              |
|              | TOT %  | 27.2 | 35.6 | 2.2 | .8  | .9  | 1.1 | 1.7 | 4.1 | .0  | 2.5  | 76.0  |              |
| TOT OBS      |        |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |     |     |     |      |       |              |
|              |        | 35.0 | 47.6 | 3.4 | 1.0 | 1.3 | 1.6 | 2.0 | 5.1 | .0  | 3.0  | 100.0 | 3321         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .1  | *   | *   | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .1   | .2   | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .3    |              |
|              | 22+        | *    | .0   | .0  | .0  | .0  | .0  | .0  | *   | .0  | .0   | *     |              |
|              | TOT %      | .2   | .2   | .1  | *   | *   | .0  | .0  | *   | .0  | .0   | .5    |              |
| 1<2          | 0-3        | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | *    | .1    |              |
|              | 4-10       | *    | .1   | .0  | .0  | .0  | .0  | .0  | *   | .0  | .0   | .2    |              |
|              | 11-21      | .1   | .3   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .4    |              |
|              | 22+        | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .2   | .4   | *   | .0  | .0  | .0  | .0  | .1  | .0  | *    | .7    |              |
| 2<5          | 0-3        | *    | *    | .0  | .0  | .0  | *   | .0  | .0  | .0  | *    | .1    |              |
|              | 4-10       | .3   | .2   | *   | .0  | .0  | .0  | *   | *   | .0  | .0   | .5    |              |
|              | 11-21      | .2   | .4   | .1  | *   | *   | .0  | .0  | *   | .0  | .0   | .7    |              |
|              | 22+        | .1   | .2   | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | TOT %      | .6   | .8   | .1  | *   | *   | *   | *   | *   | .0  | *    | 1.7   |              |
| 5<10         | 0-3        | .4   | .2   | .1  | *   | .1  | .1  | .1  | .1  | .0  | .4   | 1.3   |              |
|              | 4-10       | 2.2  | 3.2  | .5  | .2  | .2  | .1  | .4  | .0  | .0  | .0   | 7.0   |              |
|              | 11-21      | 2.6  | 3.4  | .3  | *   | .0  | .1  | *   | .2  | .0  | .0   | 8.6   |              |
|              | 22+        | .7   | 1.3  | *   | .0  | .0  | .0  | .0  | *   | .0  | .0   | 2.0   |              |
|              | TOT %      | 5.8  | 10.1 | 1.0 | .2  | .2  | .4  | .2  | .7  | .0  | .4   | 19.0  |              |
| 10+          | 0-3        | 1.1  | .8   | .2  | .1  | .4  | .3  | .3  | .5  | .0  | 2.4  | 6.1   |              |
|              | 4-10       | 11.6 | 14.7 | 1.4 | .5  | .4  | .7  | 1.0 | 2.4 | .0  | .0   | 32.7  |              |
|              | 11-21      | 11.9 | 20.3 | 1.0 | .1  | .1  | .2  | .3  | .8  | .0  | .0   | 34.7  |              |
|              | 22+        | 1.4  | 3.0  | *   | .0  | *   | *   | *   | .1  | .0  | .0   | 4.5   |              |
|              | TOT %      | 26.0 | 38.8 | 2.7 | .8  | .9  | 1.2 | 1.6 | 3.7 | .0  | 2.4  | 78.1  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |     |     |     |      |       |              |
|              |            | 32.8 | 50.4 | 3.9 | 1.0 | 1.1 | 1.6 | 1.8 | 4.5 | .0  | 2.8  | 100.0 | 4801         |

PERIOD: (PRIMARY) 1919-1973  
(OVER-ALL) 1854-1973

SEPTEMBER

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY MGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .2         | .2         | .3         | 1.7        | 8.3          | 6.7          | 1.4          | .9           | .0           | .8    | 20.3  | 79.7               | 654          |
| 06009         | .2         | .0         | .5         | 3.3        | 10.8         | 8.1          | 2.9          | 1.4          | .6           | .5    | 28.2  | 71.8               | 657          |
| 12015         | .1         | .0         | .7         | 2.1        | 6.8          | 7.0          | 3.0          | .4           | .7           | .5    | 21.3  | 78.7               | 762          |
| 18021         | .0         | .1         | .5         | 2.1        | 4.6          | 5.3          | 2.5          | .9           | .1           | .9    | 17.2  | 82.8               | 756          |
| TOT           | 3          | 2          | 14         | 65         | 212          | 190          | 70           | 25           | 10           | 19    | 610   | 2219               | 2829         |
| PCT           | .1         | .1         | .5         | 2.3        | 7.5          | 6.7          | 2.5          | .9           | .4           | .7    | 21.6  | 78.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .4    | .4  | 1.1 | 17.5 | 80.5 | 1055         |
| 06009         | .1   | .8    | .6  | 1.7 | 22.2 | 74.6 | 1353         |
| 12015         | .2   | .2    | .4  | 1.8 | 17.8 | 79.6 | 1130         |
| 18021         | .0   | .5    | 1.3 | 1.9 | 18.3 | 77.9 | 1368         |
| TOT           | 4    | 24    | 35  | 81  | 938  | 3824 | 4906         |
| PCT           | .1   | .5    | .7  | 1.7 | 19.1 | 77.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .3           | .8         | 3.6         | 18.7            | 77.7              | 615          |
| 06009         | .2           | .6         | 5.8         | 24.3            | 70.0              | 639          |
| 12015         | .1           | .8         | 4.6         | 18.1            | 77.2              | 733          |
| 18021         | .0           | .7         | 4.0         | 14.5            | 81.5              | 726          |
| TOT           | 4            | 20         | 122         | 508             | 2083              | 2713         |
| PCT           | .1           | .7         | 4.5         | 18.7            | 76.8              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .5    | .3    | .0    | .1    | .1     | 23           | .9          |
| 75/79  | .0   | .0    | .0    | .3    | 2.7   | 9.4   | 4.7   | 1.7    | 489          | 18.8        |
| 70/74  | .0   | .0    | .0    | .5    | 5.2   | 24.3  | 33.8  | 12.7   | 1992         | 76.8        |
| 65/69  | .0   | .0    | .0    | .0    | .1    | .7    | 1.8   | .9     | 91           | 3.5         |
| TOTAL  | 0    | 0     | 1     | 23    | 219   | 904   | 1048  | 400    | 2595         | 100.0       |
| PCT    | .0   | .0    | .0    | .9    | 8.4   | 34.8  | 40.4  | 15.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|-----|-----|-----|-----|-----|------|
| 80/84 | .3   | .3   | .0  | .0 | .0  | .0  | .0  | .2  | .0  | .0   |
| 75/79 | 7.3  | 8.1  | .7  | .2 | .2  | .5  | .3  | 1.1 | .0  | .4   |
| 70/74 | 26.9 | 38.5 | 2.2 | .7 | .8  | 1.0 | 1.6 | 3.5 | .0  | 1.3  |
| 65/69 | 1.2  | 1.9  | .1  | .0 | .1  | .0  | .0  | .1  | .0  | .0   |
| TOTAL | 35.6 | 48.9 | 3.0 | .9 | 1.1 | 1.6 | 2.0 | 4.9 | .0  | 1.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 77  | 75  | 72  | 69 | 67 | 63  | 71.9 | 1461         |
| 06009         | 85  | 78  | 76  | 72  | 69 | 66 | 61  | 72.0 | 2028         |
| 12015         | 87  | 82  | 79  | 75  | 71 | 68 | 63  | 74.8 | 1372         |
| 18021         | 86  | 82  | 79  | 73  | 71 | 69 | 64  | 74.0 | 2011         |
| TOT           | 87  | 81  | 78  | 73  | 70 | 68 | 61  | 73.1 | 6872         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 3.1   | 28.5  | 47.0  | 21.3   | 83   | 610          |
| 06009         | .0   | 1.2   | 5.0   | 27.9  | 45.5  | 20.5   | 82   | 660          |
| 12015         | .0   | 1.5   | 15.0  | 44.6  | 30.3  | 8.5    | 77   | 679          |
| 18021         | .0   | 1.0   | 9.6   | 37.2  | 40.6  | 11.6   | 80   | 707          |
| TOT           | 0    | 25    | 222   | 924   | 1080  | 405    | 81   | 2656         |

PERIOD: (PRIMARY) 1919-1973  
(OVER-ALL) 1854-1973

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28.0N 15.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | N<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .1       | .1       | .2       | .0       | 9     | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .2       | .0       | 13    | .0       | .4        |
| 7/8                | .0       | .0       | .1       | .5       | .8       | .3       | *        | 52    | .0       | 1.7       |
| 6                  | .0       | .0       | *        | .3       | .6       | .0       | .0       | 29    | .0       | 1.0       |
| 5                  | .0       | *        | .2       | 1.4      | 1.8      | .1       | .0       | 110   | .1       | 3.5       |
| 4                  | .0       | .2       | .8       | 1.8      | 1.1      | .0       | .0       | 121   | .1       | 3.9       |
| 3                  | .0       | .0       | .9       | 3.6      | 1.2      | .0       | .0       | 173   | .1       | 5.5       |
| 2                  | .0       | *        | 2.7      | 8.5      | 1.2      | .0       | .0       | 320   | .1       | 10.4      |
| 1                  | .0       | .1       | 4.2      | 10.0     | .3       | .0       | .0       | 448   | .2       | 14.5      |
| 0                  | .0       | .2       | 10.4     | 11.2     | .1       | .0       | .0       | 668   | .3       | 21.6      |
| -1                 | .0       | .2       | 10.7     | 6.3      | .1       | .0       | .0       | 524   | .2       | 16.9      |
| -2                 | *        | .4       | 6.1      | 2.5      | .0       | .0       | .0       | 277   | .1       | 8.9       |
| -3                 | .0       | .3       | 3.1      | .5       | *        | .0       | .0       | 120   | *        | 3.9       |
| -4                 | .1       | .4       | 2.0      | .7       | .0       | .0       | .0       | 98    | *        | 3.2       |
| -5                 | .2       | .4       | 1.0      | .1       | *        | .0       | .0       | 53    | .1       | 1.7       |
| -6                 | .1       | .1       | .2       | .1       | .0       | .0       | .0       | 15    | *        | .5        |
| -7/-8              | .0       | *        | .2       | .1       | .0       | .0       | .0       | 8     | .0       | .3        |
| -9/-10             | .1       | .1       | .2       | .0       | .0       | .0       | .0       | 10    | *        | .3        |
| -11/-13            | *        | .0       | .1       | .0       | .0       | .0       | .0       | 3     | *        | .1        |
| TOTAL              | 14       | 75       | 1307     | 1399     | 229      | 26       | 1        | 3051  | 45       | 3006      |
| PCT                | .5       | 2.5      | 42.8     | 45.9     | 7.5      | .9       | *        | 100.0 | 1.5      | 98.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      | NE  |      |       |       |       |     |      |  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |
| <1      | .9  | 2.9  | .2    | .0    | .0    | .0  | 4.0  | .4  | 1.7  | .2    | .0    | .0    | .0  | 2.3  |  |
| 1-2     | .6  | 7.7  | 2.1   | .0    | .0    | .0  | 10.4 | .2  | 7.4  | 3.0   | .0    | .0    | .0  | 10.5 |  |
| 3-4     | .0  | 3.6  | 7.0   | .4    | .0    | .0  | 11.0 | .0  | 4.4  | 10.2  | .5    | .0    | .0  | 15.1 |  |
| 5-6     | .0  | .5   | 5.1   | .5    | .1    | .0  | 6.2  | .0  | 1.1  | 7.4   | 1.4   | .1    | .0  | 9.9  |  |
| 7       | *   | *    | 2.0   | .7    | .0    | .0  | 2.7  | *   | .1   | 3.5   | 1.6   | .1    | .0  | 5.3  |  |
| 8-9     | .0  | .0   | .5    | .6    | .1    | .0  | 1.1  | .0  | .0   | .6    | .7    | .0    | .0  | 1.4  |  |
| 10-11   | .0  | .0   | .2    | .2    | .0    | .0  | .4   | .0  | .0   | .1    | .6    | .0    | .0  | .7   |  |
| 12      | .0  | .0   | *     | .1    | .0    | .0  | .2   | .0  | .0   | *     | .1    | .0    | .0  | .1   |  |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .4    | .0    | .0  | .4   |  |
| 17-19   | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | .1    | .1    | .0    | .0  | .1   |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| TOT PCT | 1.5 | 14.7 | 17.3  | 2.6   | .1    | .0  | 36.3 | .6  | 14.7 | 25.0  | 5.3   | .1    | .0  | 45.7 |  |

| E       |     |      |       |       |       |     |     | SE  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .4  | .2  | .1   | .0    | .0    | .0    | .0  | .3  |  |
| 1-2     | *   | .5   | .4    | .0    | .0    | .0  | 1.0 | .0  | .2   | .1    | .0    | .0    | .0  | .2  |  |
| 3-4     | .0  | .1   | .3    | .0    | .0    | .0  | .5  | .0  | .2   | .2    | .0    | .0    | .0  | .4  |  |
| 5-6     | .0  | .1   | .4    | .0    | .0    | .0  | .5  | .0  | *    | .0    | .0    | .0    | .0  | *   |  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .2  | 1.1  | 1.1   | .1    | .0    | .0  | 2.5 | .2  | .5   | .2    | .0    | .0    | .0  | .9  |  |



PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .2  | .4   | .0    | .0    | .0    | .0  | .7  |
| 1-2     | .1  | .3   | .0    | .0    | .0    | .0  | .4  | .1  | .3   | .1    | .0    | .0    | .0  | .4  |
| 3-4     | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | .6   | .0    | .0    | .0    | .0  | .9  | .3  | .9   | .3    | .0    | .0    | .0  | 1.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .3  | .6   | .0    | .0    | .0    | .0  | .9  | .7  | 1.0  | .0    | .0    | .0    | .0  | 1.7 |           |
| 1-2     | .0  | 1.0  | .1    | .0    | .0    | .0  | 1.2 | .2  | 1.8  | .2    | .0    | .0    | .0  | 2.2 |           |
| 3-4     | .0  | .2   | .1    | .0    | .0    | .0  | .3  | .0  | .4   | .5    | .0    | .0    | .0  | .9  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .2    | .1    | .0    | .0  | .3  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | 1.8  | .3    | .0    | .0    | .0  | 2.4 | .9  | 3.2  | 1.1   | .1    | .0    | .0  | 5.3 | 95.4      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 8.2 | 7.3  | .4    | .0    | .0    | .0  | 15.9  |         |
| 1-2     | 1.3 | 19.0 | 5.9   | .0    | .0    | .0  | 26.2  |         |
| 3-4     | .1  | 9.0  | 18.2  | .9    | .0    | .0  | 28.1  |         |
| 5-6     | .0  | 1.8  | 13.0  | 1.9   | .2    | .0  | 16.9  |         |
| 7       | .1  | .2   | 5.5   | 2.2   | .1    | .0  | 8.1   |         |
| 8-9     | .0  | .0   | 1.2   | 1.4   | .1    | .0  | 2.6   |         |
| 10-11   | .0  | .0   | .3    | .8    | .0    | .0  | 1.2   |         |
| 12      | .0  | .0   | .1    | .2    | .0    | .0  | .3    |         |
| 13-16   | .0  | .0   | .0    | .5    | .0    | .0  | .5    |         |
| 17-19   | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 9.7 | 37.3 | 44.7  | 8.0   | .3    | .0  | 100.0 | 1735    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 2.1 | 8.7  | 11.1 | 7.3  | 3.4  | 1.0 | .3    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 727      |
| 6-7          | .1  | 1.2  | 6.2  | 9.4  | 3.9  | 2.0 | 1.3   | .2  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 527      |
| 8-9          | .0  | .3   | 1.9  | 3.5  | 2.6  | 1.5 | .8    | .3  | .1    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 238      |
| 10-11        | .0  | .7   | .8   | .9   | .8   | .5  | .3    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 90       |
| 12-13        | .0  | .0   | .8   | .8   | .3   | .2  | .1    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 49       |
| >13          | .0  | .0   | .0   | .2   | .1   | .0  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 15       |
| INDET        | 6.1 | 3.8  | 5.2  | 3.2  | 2.3  | .9  | .7    | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 477      |
| TOTAL        | 176 | 311  | 593  | 539  | 285  | 133 | 78    | 25  | 19    | 4     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2123     |
| PCT          | 8.3 | 14.6 | 26.0 | 25.4 | 13.4 | 6.3 | 3.7   | 1.2 | .9    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |

## OCTOBER

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .4   | .9        | .4   | .0        | .0   | .0              | .0   | 1.6             | 1.5            | *                       | 1.6         | .0                  | 1.1        | .1                   | 94.0       |
| NE                 | .1   | .5        | .4   | .0        | .0   | .0              | .0   | 1.0             | .6             | .6                      | .8          | .1                  | .9         | .2                   | 95.8       |
| E                  | .8   | 1.5       | .5   | .0        | .0   | .0              | .0   | 2.8             | .5             | .0                      | .3          | .0                  | 1.1        | .0                   | 95.3       |
| SE                 | 1.0  | 2.6       | 1.3  | .0        | .0   | .0              | .0   | 4.8             | 1.3            | 1.3                     | .6          | .0                  | .0         | .0                   | 92.0       |
| S                  | .9   | .8        | .0   | .0        | .0   | .0              | .0   | 1.7             | 2.3            | .0                      | .8          | .0                  | .0         | .0                   | 95.3       |
| SW                 | 2.6  | 4.5       | 1.1  | .0        | .0   | .0              | .0   | 8.2             | 2.2            | 2.8                     | .0          | .0                  | 1.1        | .0                   | 86.2       |
| W                  | 2.0  | 2.7       | 1.0  | .0        | .0   | .0              | .0   | 5.7             | 2.8            | 2.3                     | 1.0         | .0                  | .5         | .0                   | 88.3       |
| NW                 | 1.1  | 1.5       | .3   | .0        | .0   | .0              | .0   | 3.0             | 1.2            | .8                      | 1.0         | .0                  | .0         | .0                   | 94.3       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .5             | .0                      | 4.1         | .0                  | .5         | .0                   | 95.0       |
| TOT PCT            | .6   | 1.1       | .4   | .0        | .0   | .0              | .0   | 2.0             | 1.1            | .6                      | 1.2         | .1                  | .8         | .1                   | 94.2       |
| TOT OBS:           | 3797 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                      |      | OTHER WEATHER PHENOMENA |                      |              |                   |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|----------------------|------|-------------------------|----------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHR<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN<br>PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .3                 | .7           | .3   | .0           | .0   | .0                   | .0   | 1.4                     | 2.0                  | .4           | 1.2               | .0                        | .3            | .1                                    | 94.7             |
| 06009         | .5                 | 1.3          | .8   | .0           | .0   | .0                   | .0   | 2.6                     | 1.3                  | 1.3          | 1.3               | .0                        | .7            | .2                                    | 92.7             |
| 12015         | .7                 | .8           | .2   | .0           | .0   | .0                   | .0   | 1.8                     | .8                   | .0           | 1.0               | .2                        | 1.1           | .1                                    | 95.0             |
| 18021         | .6                 | 1.1          | .4   | .0           | .0   | .0                   | .0   | 2.0                     | .5                   | .6           | 1.3               | .0                        | 1.0           | .1                                    | 94.7             |
| TOT PCT       | .5                 | 1.0          | .4   | .0           | .0   | .0                   | .0   | 2.0                     | 1.1                  | .6           | 1.2               | .1                        | .8            | .1                                    | 94.3             |
| TOT OBS:      | 3970               |              |      |              |      |                      |      |                         |                      |              |                   |                           |               |                                       |                  |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |    |  |  |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|----|--|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21 |  |  |
| N        | 1.8                | 12.6 | 8.4   | .8    | *     | .0 | 23.6 | 10.0  | 23.5      | 23.0     | 24.2     | 20.2       | 23.1  | 25.0  | 25.9  | 21.9  |    |  |  |
| NE       | 2.1                | 19.6 | 17.0  | 2.3   | .1    | .0 | 41.1 | 11.3  | 42.4      | 44.1     | 39.8     | 45.1       | 40.5  | 44.8  | 39.0  | 42.4  |    |  |  |
| E        | 1.0                | 3.4  | 1.4   | .1    | .0    | .0 | 5.9  | 8.4   | 5.5       | 4.3      | 5.9      | 5.6        | 7.0   | 4.5   | 6.1   | 5.3   |    |  |  |
| SE       | .5                 | 1.5  | .3    | *     | .0    | .0 | 2.3  | 6.9   | 2.0       | 5.5      | 2.4      | 1.8        | 2.6   | 3.2   | 2.0   | 2.8   |    |  |  |
| S        | .6                 | 2.0  | .9    | .1    | .0    | .0 | 3.5  | 8.6   | 3.0       | 2.3      | 2.9      | 3.8        | 4.1   | 4.7   | 4.1   | 3.8   |    |  |  |
| SW       | .8                 | 2.9  | 1.4   | .3    | *     | .0 | 5.4  | 9.3   | 5.2       | 3.2      | 5.3      | 5.1        | 4.5   | 2.2   | 5.9   | 6.9   |    |  |  |
| W        | 1.0                | 3.0  | 1.5   | .2    | *     | .0 | 5.7  | 8.7   | 4.9       | 6.4      | 6.0      | 7.1        | 5.7   | 3.7   | 5.7   | 5.8   |    |  |  |
| NW       | 1.0                | 4.6  | 1.6   | .1    | *     | .0 | 7.3  | 8.4   | 7.8       | 7.7      | 7.6      | 8.2        | 6.8   | 9.9   | 6.8   | 6.9   |    |  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 | .0   | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    |    |  |  |
| CALM     | 5.1                |      |       |       |       |    | 5.1  | .0    | 5.6       | 3.6      | 6.0      | 2.9        | 5.6   | 2.0   | 4.5   | 4.3   |    |  |  |
| TOT OBS  | 1085               | 3903 | 2574  | 316   | 14    | 0  | 7892 |       | 1655      | 110      | 1600     | 652        | 1419  | 101   | 1539  | 816   |    |  |  |
| TOT PCT  | 13.7               | 49.5 | 32.6  | 4.0   | .2    | .0 |      | 100.0 | 100.0     | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 |    |  |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 7.0                | 13.6 | 2.7   | .2    | .0  |           | 23.6     | 10.0     | 23.5       | 23.0  | 23.2  | 24.5  |
| NE       | 9.1                | 24.3 | 7.3   | .5    | *   |           | 41.1     | 11.3     | 42.5       | 41.3  | 40.7  | 40.1  |
| E        | 2.6                | 2.8  | .4    | *     | .0  |           | 5.9      | 8.4      | 5.5        | 5.8   | 6.9   | 5.8   |
| SE       | 1.3                | .9   | .1    | .0    | .0  |           | 2.3      | 6.9      | 2.2        | 2.2   | 2.6   | 2.3   |
| S        | 1.7                | 1.4  | .4    | *     | .0  |           | 3.5      | 8.6      | 2.9        | 3.1   | 4.2   | 4.0   |
| SW       | 2.3                | 2.2  | .8    | .1    | .0  |           | 5.4      | 9.3      | 5.1        | 5.3   | 4.4   | 6.3   |
| W        | 2.4                | 2.7  | .6    | *     | .0  |           | 5.7      | 8.7      | 5.0        | 6.3   | 5.6   | 5.7   |
| NW       | 3.4                | 3.4  | .6    | .1    | .0  |           | 7.3      | 8.4      | 7.8        | 7.8   | 7.0   | 6.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 5.1                |      |       |       |     |           | 5.1      | .0       | 5.5        | 5.1   | 5.4   | 4.5   |
| TOT OBS  | 2755               | 4049 | 1014  | 73    | 1   | 7892      |          | 9.6      | 1765       | 2252  | 1520  | 2355  |
| TOT PCT  | 34.9               | 51.3 | 12.8  | .9    | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

OCTOBER

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |     |       |          |           |
| 00003 | 5.5  | 8.5 | 49.1 | 32.8               | 4.0   | .1    | .0 | .0  | 9.6   | 100.0    | 1765      |
| 06009 | 5.1  | 9.0 | 51.1 | 31.2               | 3.5   | .1    | .0 | .0  | 9.3   | 100.0    | 2252      |
| 12015 | 5.4  | 8.0 | 46.1 | 35.1               | 4.6   | .3    | .0 | .0  | 9.9   | 100.0    | 1520      |
| 18021 | 4.5  | 8.6 | 50.3 | 32.3               | 4.1   | .3    | .0 | .0  | 9.7   | 100.0    | 2355      |
| TOT   | 399  | 686 | 3903 | 2574               | 316   | 14    | 0  | 0   | 9.6   |          | 7892      |
| PCT   | 5.1  | 8.7 | 49.5 | 32.6               | 4.0   | .2    | .0 |     | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 12.9 | 6.5  | 7.6  | 1.5          |              | 3.2                    |
| NE       | 18.5 | 9.4  | 8.8  | 2.0          |              | 3.0                    |
| E        | 2.1  | .8   | 1.5  | .3           |              | 3.4                    |
| SE       | .8   | .5   | .6   | .2           |              | 3.7                    |
| S        | 1.1  | 1.1  | 1.2  | .3           |              | 3.9                    |
| SW       | 1.5  | .9   | 1.3  | .3           |              | 3.7                    |
| W        | 2.2  | 1.2  | 1.1  | .2           |              | 3.1                    |
| NW       | 3.5  | 1.6  | 2.1  | .4           |              | 3.2                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 3.9  | .8   | 1.1  | .3           |              | 2.4                    |
| TOT OBS  | 1396 | 681  | 758  | 165          | 3000         | 3.1                    |
| TOT PCT  | 46.5 | 22.7 | 25.3 | 5.5          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+<br>ANY HGT | NH <5/8<br>TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------------------|
|         |            |            |            |            |              |              |              |              |              |                  |                         |
| N       | .1         | .1         | .1         | .7         | 2.1          | 1.9          | .3           | .1           | .3           | .2               | 22.7                    |
| NE      | .2         | .0         | .2         | .5         | 2.0          | 2.2          | .8           | .4           | .1           | .6               | 31.6                    |
| E       | .0         | .0         | .0         | .1         | .6           | .3           | .0           | .0           | .0           | .2               | 3.5                     |
| SE      | .0         | .0         | .0         | .0         | .1           | .1           | .0           | .0           | .0           | .1               | 1.6                     |
| S       | .0         | .0         | .0         | .1         | .2           | .2           | .1           | .0           | .0           | .1               | 3.0                     |
| SW      | .0         | .0         | .1         | .3         | .2           | .4           | .1           | .0           | .1           | .0               | 2.9                     |
| W       | .0         | .0         | .0         | .0         | .2           | .2           | .1           | .0           | .0           | .0               | 4.0                     |
| NW      | .0         | .0         | .0         | .1         | .6           | .5           | .1           | .1           | .0           | .1               | 6.1                     |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0               | .0                      |
| CALM    | .1         | .0         | .0         | .0         | .4           | .3           | .1           | .0           | .0           | .1               | 5.1                     |
| TOT OBS | 12         | 3          | 11         | 55         | 194          | 183          | 51           | 18           | 19           | 41               | 2413                    |
| TOT PCT | .4         | .1         | .4         | 1.8        | 6.5          | 6.1          | 1.7          | .6           | .6           | 1.4              | 80.4                    |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.7         | 2.0        | 2.0        | 2.0        | 2.0          | 2.0          | 2.0           | 2.0        |
| = OR >5000        | 2.1         | 2.5        | 2.6        | 2.6        | 2.6          | 2.6          | 2.6           | 2.6        |
| = OR >3500        | 3.5         | 4.2        | 4.3        | 4.3        | 4.3          | 4.3          | 4.3           | 4.3        |
| = OR >2000        | 7.8         | 10.1       | 10.4       | 10.4       | 10.4         | 10.4         | 10.4          | 10.4       |
| = OR >1000        | 13.2        | 16.3       | 16.7       | 16.8       | 16.8         | 16.8         | 16.8          | 16.8       |
| = OR >600         | 14.7        | 18.1       | 18.5       | 18.6       | 18.6         | 18.6         | 18.6          | 18.6       |
| = OR >300         | 14.9        | 18.3       | 18.9       | 19.0       | 19.0         | 19.0         | 19.0          | 19.0       |
| = OR >150         | 14.9        | 18.4       | 18.9       | 19.1       | 19.1         | 19.1         | 19.1          | 19.1       |
| = OR >0           | 14.9        | 18.4       | 19.1       | 19.3       | 19.3         | 19.4         | 19.5          | 19.5       |
| TOTAL             | 460         | 566        | 589        | 594        | 594          | 596          | 599           | 600        |

TOTAL NUMBER OF OBS: 3079

PCT FREQ NH <5/8: 80.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|-----|-----|-----|-------|--------------|
|  | 21.8 | 17.9 | 17.8 | 13.3 | 9.0 | 5.2 | 5.5 | 5.2 | 4.0 | .4    | 3281         |



PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

OCTOBER

AREA 0004 CANARY ISLANDS  
26.0N 15.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N         | NE   | E   | SE  | S   | SW  | W   | NW | VAR | CALM  | PCT | TOTAL<br>OBS |
|--------------|--------|-----------|------|-----|-----|-----|-----|-----|----|-----|-------|-----|--------------|
| <1/2         | PCP    | .0        | .0   | .0  | .0  | .0  | .0  | .0  | .0 | .0  | .0    | .0  |              |
|              | NO PCP | * .1      | .0   | .0  | .0  | .0  | .0  | .0  | .0 | .0  | .1    | .2  |              |
|              | TOT %  | * .1      | .0   | .0  | .0  | .0  | .0  | .0  | .0 | .0  | .1    | .2  |              |
| 1/2<1        | PCP    | .0        | .0   | .0  | .0  | *   | *   | *   | .0 | .0  | .0    | .1  |              |
|              | NO PCP | * *       | .0   | .0  | .0  | .0  | *   | *   | .0 | .0  | .0    | .1  |              |
|              | TOT %  | * *       | .0   | .0  | .0  | .0  | *   | *   | .0 | .0  | .0    | .2  |              |
| 1<2          | PCP    | .0        | .0   | .0  | .0  | .0  | .0  | .0  | .0 | .0  | .0    | .0  |              |
|              | NO PCP | .1 .1     | .1   | .0  | .0  | *   | *   | *   | .0 | .0  | *     | .4  |              |
|              | TOT %  | .1 .1     | .1   | .0  | .0  | *   | *   | *   | .0 | .0  | *     | .4  |              |
| 2<5          | PCP    | .0        | .0   | .0  | .0  | *   | .1  | *   | *  | .0  | .0    | .2  |              |
|              | NO PCP | .4 .5     | *    | .0  | .0  | .1  | .0  | *   | .0 | .0  | .3    | 1.4 |              |
|              | TOT %  | .4 .5     | *    | .0  | .0  | .1  | .0  | *   | .0 | .0  | .3    | 1.6 |              |
| 5<10         | PCP    | .2        | .2   | .1  | *   | *   | .2  | .2  | .1 | .0  | .0    | 1.1 |              |
|              | NO PCP | 5.5 8.1   | .9   | .9  | .9  | 1.3 | .8  | 1.3 | .0 | 1.4 | 20.3  |     |              |
|              | TOT %  | 5.7 8.2   | 1.0  | .9  | .9  | 1.5 | 1.0 | 1.5 | .0 | 1.4 | 21.4  |     |              |
| 10+          | PCP    | .2        | .2   | *   | .0  | .0  | .1  | *   | .1 | .0  | .0    | .7  |              |
|              | NO PCP | 20.7 29.8 | 5.5  | 5.5 | 5.5 | 8.2 | 5.9 | 8.2 | .0 | 9.9 | 75.7  |     |              |
|              | TOT %  | 20.9 29.9 | 5.5  | 5.5 | 5.5 | 8.2 | 5.9 | 8.2 | .0 | 9.9 | 76.4  |     |              |
| TOT OBS      |        | 3789      |      |     |     |     |     |     |    |     |       |     |              |
| TOT PCT      |        | 27.2      | 28.8 | 7.5 | 2.1 | 3.4 | 7.5 | 7.5 | .0 | 5.8 | 100.0 |     |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N         | NE   | E   | SE  | S   | SW  | W   | NW  | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-----------|------|-----|-----|-----|-----|-----|-----|------|------|-------|--------------|
| <1/2         | 0-3        | .0        | *    | *   | .0  | .0  | .0  | .0  | .0  | .0   | .1   | .1    |              |
|              | 4-10       | *         | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .1    |              |
|              | 11-21      | *         | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | *     |              |
|              | 22+        | *         | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | *     |              |
|              | TOT %      | .1        | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .1   | .2    |              |
| 1/2<1        | 0-3        | .0        | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | *     |              |
|              | 4-10       | .0        | .0   | .0  | .0  | *   | *   | .1  | .0  | .0   | .0   | .1    |              |
|              | 11-21      | *         | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | *     |              |
|              | 22+        | .0        | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | *     |              |
|              | TOT %      | *         | .1   | .0  | .0  | *   | *   | .1  | .0  | .0   | .0   | .1    |              |
| 1<2          | 0-3        | *         | .0   | *   | .0  | .0  | .0  | .0  | .0  | .0   | *    | .1    |              |
|              | 4-10       | *         | .1   | *   | .0  | .0  | *   | *   | .0  | .0   | .0   | .2    |              |
|              | 11-21      | .1        | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .1    |              |
|              | 22+        | .0        | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .0    |              |
|              | TOT %      | .1        | .1   | .1  | .0  | .0  | *   | *   | .0  | .0   | *    | .4    |              |
| 2<5          | 0-3        | *         | *    | .0  | .0  | *   | .1  | *   | *   | .0   | .3   | .5    |              |
|              | 4-10       | .1        | .2   | *   | .0  | *   | .1  | *   | *   | .0   | .5   | .5    |              |
|              | 11-21      | .2        | .2   | *   | .0  | .0  | .1  | .0  | .1  | .0   | .5   | .5    |              |
|              | 22+        | .0        | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1   | .1    |              |
|              | TOT %      | .3        | .5   | .1  | .0  | .1  | .3  | .1  | .1  | .0   | .3   | 1.6   |              |
| 5<10         | 0-3        | .4        | .6   | .1  | .1  | .1  | .2  | .1  | .1  | .0   | 1.2  | 2.8   |              |
|              | 4-10       | 2.5 3.3   | .6   | .2  | .3  | .7  | .5  | .9  | .0  | .0   | 8.9  |       |              |
|              | 11-21      | 1.8 3.4   | .3   | *   | .2  | .3  | .2  | .3  | .0  | .0   | 6.5  |       |              |
|              | 22+        | .2 .5     | *    | .0  | *   | .1  | *   | .0  | .0  | .0   | .9   |       |              |
|              | TOT %      | 4.8 7.7   | 1.0  | .3  | .6  | 1.2 | .9  | 1.3 | .0  | 1.2  | 19.0 |       |              |
| 10+          | 0-3        | 1.4 1.4   | .7   | .3  | .4  | .5  | .8  | .8  | .0  | 3.9  | 10.1 |       |              |
|              | 4-10       | 11.0 15.5 | 2.4  | 1.1 | 1.5 | 1.8 | 2.2 | 3.8 | .0  | 39.2 |      |       |              |
|              | 11-21      | 7.5 13.6  | 1.0  | .3  | .8  | .9  | 1.1 | 1.4 | .0  | 26.5 |      |       |              |
|              | 22+        | .6 1.8    | *    | *   | .1  | .2  | .1  | .1  | .0  | 2.9  |      |       |              |
|              | TOT %      | 20.4 32.3 | 4.1  | 1.8 | 2.7 | 3.3 | 4.1 | 6.0 | .0  | 3.9  | 78.6 |       |              |
| TOT OBS      |            | 5460      |      |     |     |     |     |     |     |      |      |       |              |
| TOT PCT      |            | 25.8      | 40.7 | 5.2 | 2.1 | 3.4 | 4.8 | 5.1 | 7.4 | .0   | 5.4  | 100.0 |              |

## OCTOBER

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .5         | .0         | .0         | 2.0        | 5.4          | 5.1          | 1.5          | .8           | .9           | .9    | 17.1  | 82.9               | 791          |
| 06009         | .5         | .1         | .4         | 2.4        | 8.0          | 6.4          | 1.6          | .4           | .7           | 1.7   | 22.4  | 77.6               | 747          |
| 12015         | .5         | .1         | .5         | 1.3        | 6.5          | 6.7          | 2.1          | .2           | .1           | 2.0   | 20.0  | 80.0               | 819          |
| 18021         | .0         | .1         | .5         | 1.5        | 4.8          | 5.2          | 1.6          | .8           | .7           | .9    | 16.2  | 83.8               | 866          |
| TOT           | 12         | 3          | 11         | 58         | 198          | 188          | 55           | 18           | 19           | 44    | 606   | 2617               | 3223         |
| PCT           | .4         | .1         | .3         | 1.8        | 6.1          | 5.8          | 1.7          | .6           | .6           | 1.4   | 18.8  | 81.2               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS8Y (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .1    | .2  | 1.6 | 18.1 | 79.8 | 1320         |
| 06009         | .3   | .5    | .4  | 1.8 | 21.6 | 75.4 | 1512         |
| 12015         | .2   | .2    | .7  | 1.2 | 17.8 | 80.0 | 1222         |
| 18021         | .1   | .1    | .3  | 1.5 | 19.2 | 78.8 | 1580         |
| TOT           | 12   | 11    | 21  | 86  | 1088 | 4416 | 5634         |
| PCT           | .2   | .2    | .4  | 1.5 | 19.3 | 78.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS8Y (NM) AND/OR  
CEILING HGT (FEET, NM >4/8), BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .5            | .5         | 3.8         | 14.6            | 81.7              | 742          |
| 06009         | .7            | 1.3        | 5.2         | 19.6            | 75.2              | 710          |
| 12015         | .5            | 1.1        | 3.9         | 17.5            | 78.6              | 794          |
| 18021         | .0            | .6         | 4.0         | 13.8            | 82.2              | 833          |
| TOT           | 13            | 27         | 129         | 501             | 2449              | 3079         |
| PCT           | .4            | .9         | 4.2         | 16.3            | 79.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .1    | .3    | .4    | .1    | .0     | 25           | .9          |
| 75/79  | .0   | .0    | .1    | .3    | 2.2   | 5.2   | 3.0   | .5     | 324          | 11.3        |
| 70/74  | .0   | .0    | .5    | 10.0  | 26.1  | 31.0  | 11.8  | .5     | 2273         | 79.4        |
| 65/69  | .0   | .0    | .0    | .2    | .9    | 2.5   | 1.8   | .5     | 237          | 8.3         |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .1    | .1    | .0     | 5            | .2          |
| TOTAL  | 0    | 0     | 3     | 34    | 384   | 981   | 1057  | 405    | 2864         | 100.0       |
| PCT    | .0   | .0    | .1    | 1.2   | 13.4  | 34.3  | 36.9  | 14.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| .3   | .3   | .1  | *   | .1  | .0  | *   | *   | .0  | .1   |
| 3.4  | 4.5  | .7  | .3  | .4  | .5  | .4  | .6  | .0  | .5   |
| 21.2 | 31.8 | 3.8 | 2.0 | 2.7 | 3.4 | 4.9 | 6.3 | .0  | 3.3  |
| 2.4  | 3.7  | .4  | *   | .1  | .2  | .3  | .8  | .0  | .3   |
| *    | *    | .0  | *   | .1  | .0  | .0  | .0  | .0  | .0   |
| 27.4 | 40.3 | 5.0 | 2.3 | 3.5 | 4.2 | 5.5 | 7.6 | .0  | 4.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 81  | 76  | 74  | 71  | 68 | 65 | 61  | 71.1 | 1780         |
| 06009         | 82  | 76  | 75  | 71  | 68 | 65 | 58  | 71.1 | 2276         |
| 12015         | 85  | 82  | 79  | 74  | 70 | 67 | 58  | 73.9 | 1510         |
| 18021         | 86  | 80  | 77  | 73  | 69 | 66 | 61  | 72.9 | 2344         |
| TOT           | 86  | 80  | 77  | 72  | 68 | 66 | 58  | 72.2 | 7910         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .5    | 9.7   | 27.5  | 42.6  | 19.7   | 82   | 746          |
| 06009         | .0   | 1.1   | 8.2   | 28.8  | 42.9  | 18.9   | 81   | 729          |
| 12015         | .0   | 2.8   | 21.1  | 41.0  | 27.6  | 7.6    | 76   | 722          |
| 18021         | .0   | 1.0   | 13.5  | 38.9  | 35.3  | 11.3   | 79   | 791          |
| TOT           | 0    | 40    | 391   | 1019  | 1109  | 429    | 80   | 2988         |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>66 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .1       | .0       | .1       | .0       | 5     | *        | .1        |
| 11/13              | .0       | .0       | *        | .0       | .2       | .0       | .0       | 8     | *        | .2        |
| 9/10               | .0       | .0       | *        | .2       | .1       | .1       | *        | 17    | .0       | .5        |
| 7/8                | .0       | .0       | .1       | .4       | .6       | .2       | .0       | 46    | .0       | 1.3       |
| 6                  | .0       | .0       | .1       | .4       | .5       | .1       | .0       | 40    | .0       | 1.1       |
| 5                  | .0       | .1       | .5       | 1.2      | .8       | .0       | .0       | 89    | .1       | 2.4       |
| 4                  | .0       | .1       | .6       | 1.4      | .5       | *        | .0       | 93    | .1       | 2.5       |
| 3                  | .0       | .1       | .7       | 2.8      | .6       | .0       | .0       | 151   | .1       | 4.2       |
| 2                  | *        | .5       | 2.6      | 4.8      | .5       | *        | .0       | 303   | .2       | 8.3       |
| 1                  | *        | .5       | 5.1      | 7.3      | .2       | *        | .0       | 472   | .1       | 13.0      |
| 0                  | .1       | .9       | 11.2     | 8.1      | .3       | .0       | .0       | 734   | .2       | 20.3      |
| -1                 | .0       | .7       | 14.4     | 4.5      | .1       | .0       | .0       | 705   | .2       | 19.5      |
| -2                 | .1       | 1.1      | 9.9      | 1.8      | *        | .0       | .0       | 460   | .2       | 12.7      |
| -3                 | .0       | .7       | 4.5      | .8       | .0       | .0       | .0       | 213   | *        | 5.9       |
| -4                 | .1       | 1.0      | 2.2      | .3       | .0       | .0       | .0       | 130   | *        | 3.6       |
| -5                 | .1       | .6       | 1.1      | .2       | .0       | .0       | .0       | 73    | *        | 2.0       |
| -6                 | *        | .2       | .4       | .1       | .0       | .0       | .0       | 24    | .0       | .7        |
| -7/-8              | .1       | .2       | .2       | .0       | .0       | .0       | .0       | 16    | .0       | .4        |
| -9/-10             | *        | *        | .1       | .0       | .0       | .0       | .0       | 4     | .1       | .1        |
| -11/-13            | .1       | *        | .0       | .0       | .0       | .0       | .0       | 3     | *        | .1        |
| TOTAL              | 19       |          | 1926     |          | 157      |          | 1        | 3586  | 45       | 3541      |
| PCT                | .5       | 6.5      | 53.7     | 34.3     | 4.4      | .5       | *        | 100.0 | 1.3      | 98.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 2.7  | .2    | .0    | .0    | .0  | 3.6  | .8  | 2.6  | .2    | .0    | .0    | .0  | 3.7  |
| 1-2     | .5  | 9.1  | 2.8   | .0    | .0    | .0  | 12.3 | .5  | 10.4 | 3.1   | .0    | .0    | .0  | 14.0 |
| 3-4     | *   | 3.3  | 4.1   | .1    | .0    | .0  | 7.6  | .0  | 3.7  | 7.0   | .3    | .0    | .0  | 11.1 |
| 5-6     | .0  | .6   | 2.5   | .2    | .0    | .0  | 3.2  | .0  | .8   | 4.4   | .5    | .0    | .0  | 5.7  |
| 7       | .0  | *    | .9    | .2    | .0    | .0  | 1.1  | .0  | .1   | 1.3   | .4    | .0    | .0  | 1.7  |
| 8-9     | .0  | *    | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .3    | .4    | .0    | .0  | .6   |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | *     | .3    | .0    | .0  | .3   |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 13-16   | .0  | .0   | *     | .0    | *     | .0  | .1   | .0  | .0   | .1    | .2    | .2    | .0  | .4   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.3 | 15.7 | 10.5  | .7    | *     | .0  | 28.2 | 1.3 | 17.6 | 16.4  | 2.1   | .2    | .0  | 37.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .5  | .8   | *     | .0    | .0    | .0  | 1.4 | .2  | .4   | *     | .0    | .0    | .0  | .6  |
| 1-2     | .2  | 1.0  | .3    | .0    | .0    | .0  | 1.6 | .1  | .7   | .1    | .0    | .0    | .0  | .8  |
| 3-4     | .0  | .6   | .6    | .0    | .0    | .0  | 1.1 | .0  | .2   | .2    | .0    | .0    | .0  | .4  |
| 5-6     | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 2.5  | 1.3   | *     | .0    | .0  | 4.6 | .3  | 1.2  | .3    | .0    | .0    | .0  | 1.9 |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .2  | .4   | *     | .0    | .0    | .0  | .7  | .2  | .7   | .1    | .0    | .0    | .0  | .0  | 1.0 |
| 1-2     | .2  | .9   | .2    | .0    | .0    | .0  | 1.3 | .2  | .9   | .2    | .0    | .0    | .0  | .0  | 1.2 |
| 3-4     | .0  | .3   | .6    | .0    | .0    | .0  | 1.0 | .0  | .5   | .5    | *     | .0    | .0  | .0  | 1.0 |
| 5-6     | .0  | .0   | .3    | *     | .0    | .0  | .4  | .0  | .0   | .4    | .1    | .0    | .0  | .0  | .5  |
| 7       | .0  | *    | .1    | *     | .0    | .0  | .2  | .0  | .0   | .1    | .2    | .0    | .0  | .0  | .3  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | .0   | .1    | .1    | .0    | .0  | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | .0  | *   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| TOT PCT | .4  | 1.7  | 1.3   | .1    | .0    | .0  | 3.5 | .4  | 2.1  | 1.5   | .4    | .0    | .0  | .0  | 4.4 |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |           |
| <1      | .6  | .5   | .0    | .0    | .0    | .0  | 1.0 | .4  | 1.4  | .1    | .0    | .0    | .0  | .0  | 1.9 |           |
| 1-2     | .2  | 1.6  | .3    | .0    | .0    | .0  | 2.1 | .3  | 2.5  | .2    | .0    | .0    | .0  | .0  | 3.0 |           |
| 3-4     | .0  | .5   | .6    | .0    | .0    | .0  | 1.1 | .0  | .5   | .7    | *     | .0    | .0  | .0  | 1.3 |           |
| 5-6     | .0  | .0   | .4    | .1    | .0    | .0  | .4  | .0  | *    | .4    | .1    | .0    | .0  | .0  | .5  |           |
| 7       | .0  | .0   | .3    | .1    | .0    | .0  | .4  | .0  | *    | .1    | .1    | .0    | .0  | .0  | .2  |           |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | *    | .1    | .0    | .0    | .0  | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |           |
| TOT PCT | .7  | 2.5  | 1.6   | .2    | .0    | .0  | 5.1 | .7  | 4.6  | 1.7   | .1    | .0    | .0  | .0  | 7.0 | 92.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 12.4 | 9.5  | .8    | .0    | .0    | .0  | 22.6  |         |
| 1-2     | 2.3  | 26.8 | 7.0   | .0    | .0    | .0  | 36.2  |         |
| 3-4     | .1   | 9.5  | 14.0  | .5    | .0    | .0  | 24.1  |         |
| 5-6     | .0   | 1.4  | 8.4   | 1.0   | .0    | .0  | 10.9  |         |
| 7       | .0   | .2   | 2.8   | .9    | .0    | .0  | 3.9   |         |
| 8-9     | .0   | *    | .6    | .6    | .0    | .0  | 1.2   |         |
| 10-11   | .0   | .0   | .1    | .3    | .0    | .0  | .4    |         |
| 12      | .0   | .0   | *     | .1    | .0    | .0  | .2    |         |
| 13-16   | .0   | .0   | .1    | .2    | .0    | .0  | .6    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 14.8 | 47.5 | 33.9  | 3.6   | .2    | .0  | 100.0 | 2143    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1   | 1-2  | 3-4  | 5-6  | 7   | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|------|------|------|------|-----|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 3.2  | 12.7 | 11.3 | 6.0  | 1.9 | .4  | .1    | .0 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 904      |
| 6-7          | *    | 1.8  | 5.2  | 6.6  | 3.0 | 1.3 | .2    | .3 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 466      |
| 8-9          | .0   | 1.1  | 2.2  | 2.2  | 1.7 | 1.2 | .9    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 237      |
| 10-11        | .0   | .8   | 1.3  | .7   | .9  | 1.3 | .4    | .2 | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 122      |
| 12-13        | .0   | .0   | 1.5  | .9   | .4  | .2  | .3    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 83       |
| >13          | .0   | .0   | .0   | .3   | .2  | .0  | .1    | *  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 19       |
| INDET        | 8.3  | 6.2  | 6.0  | 3.5  | 1.7 | .8  | .2    | .2 | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 690      |
| TOTAL        | 290  | 568  | 696  | 510  | 247 | 106 | 53    | 21 | 28    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2521     |
| PCT          | 11.5 | 22.5 | 27.6 | 20.2 | 9.8 | 4.2 | 2.1   | .8 | 1.1   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0004 CANARY ISLANDS  
28.0N 15.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FGD WD PCPN | FGD WD PCPN PAST HR | SNOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | .8   | 2.0       | .8   | .0        | .0   | .0              | .0   | 3.6             | 2.1            | .2                      | .5          | .0                  | .5         | .0              | 93.0       |  |
| NE                 | .3   | 1.1       | .4   | .0        | .0   | .0              | .0   | 1.8             | .5             | .4                      | .5          | .0                  | .2         | .1              | 96.5       |  |
| E                  | 1.7  | 1.1       | .1   | .0        | .0   | .0              | .0   | 2.9             | 1.7            | 1.2                     | 1.2         | .0                  | 1.4        | .6              | 91.2       |  |
| SE                 | 3.0  | 2.7       | 2.3  | .0        | .0   | .0              | .0   | 8.1             | 2.9            | 5.0                     | 1.2         | .0                  | .0         | .0              | 82.9       |  |
| S                  | 4.6  | 2.5       | 1.0  | .0        | .0   | .0              | .0   | 8.1             | 2.8            | 3.2                     | .3          | .0                  | .3         | .0              | 85.7       |  |
| SW                 | 2.8  | 2.1       | 1.6  | .0        | .0   | .0              | .0   | 6.5             | 1.4            | 2.4                     | .4          | .0                  | 1.3        | .0              | 88.0       |  |
| W                  | 2.8  | 4.7       | 1.5  | .0        | .0   | .0              | .0   | 9.0             | 3.7            | 1.9                     | .0          | .0                  | .3         | .0              | 85.1       |  |
| NW                 | 2.0  | 2.4       | 1.3  | .0        | .0   | .0              | .0   | 5.7             | 1.5            | .0                      | .8          | .0                  | .4         | .0              | 91.6       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | 2.0  | .0        | .0   | .0        | .0   | .0              | .0   | 2.0             | .5             | .5                      | 1.5         | .0                  | .0         | .0              | 95.5       |  |
| TOT                | 1.5  | 1.8       | .8   | .0        | .0   | .0              | .0   | 4.1             | 1.5            | 1.1                     | .6          | .0                  | .4         | .1              | 92.2       |  |
| PCT OBS:           | 3848 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                      |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|----------------------|---------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | BLWG<br>DUST<br>BLWG | NO SIG<br>WEA |
| 0000          | 1.3                | .8           | .7   | .0           | .0   | .0                    | .0   | 2.9                     | 1.6               | 2.0          | .6                | .0                        | .5            | .1                   | 92.2          |
| 0600          | 1.0                | 2.2          | 1.2  | .0           | .0   | .0                    | .0   | 4.3                     | 1.5               | 1.5          | .6                | .0                        | .4            | .0                   | 91.8          |
| 1200          | 1.9                | 2.0          | .8   | .0           | .0   | .0                    | .0   | 4.7                     | 1.9               | .3           | .4                | .0                        | .2            | .1                   | 92.5          |
| 1800          | 1.7                | 2.2          | .7   | .0           | .0   | .0                    | .0   | 4.5                     | 1.3               | .7           | 1.1               | .0                        | .7            | .1                   | 91.8          |
| TOT PCT       | 1.5                | 1.8          | .8   | .0           | .0   | .0                    | .0   | 4.1                     | 1.6               | 1.1          | .7                | .0                        | .4            | .1                   | 92.1          |
| TOT OBS:      | 4007               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                      |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.3                | 7.6  | 7.0   | 1.3   | .1    | .0  |      | 17.2      | 11.5     |          | 18.4       | 17.8  | 16.1  | 16.3  | 16.5  | 19.1  | 18.4  | 16.4  |
| NE       | 1.5                | 15.6 | 18.6  | 2.8   | .1    | .0  |      | 38.7      | 12.2     |          | 37.9       | 33.0  | 38.7  | 39.4  | 37.8  | 33.5  | 38.0  | 44.5  |
| E        | 1.0                | 5.8  | 3.5   | .5    | *     | .0  |      | 10.8      | 10.0     |          | 10.3       | 12.4  | 10.8  | 11.7  | 10.9  | 16.0  | 10.4  | 11.5  |
| SE       | .6                 | 2.7  | 1.3   | .3    | .1    | .0  |      | 4.9       | 10.0     |          | 4.4        | 3.9   | 4.8   | 5.5   | 6.2   | 6.1   | 4.7   | 3.8   |
| S        | .6                 | 2.5  | 1.8   | .5    | .1    | .0  |      | 5.5       | 11.2     |          | 5.8        | 8.2   | 4.8   | 4.5   | 6.7   | 8.2   | 5.4   | 3.8   |
| SW       | .6                 | 3.2  | 1.8   | .5    | .1    | .0  |      | 6.2       | 10.7     |          | 6.2        | 6.4   | 6.4   | 6.8   | 6.2   | 8.0   | 6.6   | 4.6   |
| W        | .5                 | 3.0  | 1.5   | .5    | *     | .0  |      | 5.5       | 10.3     |          | 4.6        | 8.0   | 5.4   | 5.6   | 6.0   | 3.7   | 5.9   | 5.9   |
| NW       | .8                 | 3.6  | 2.0   | .6    | *     | .0  |      | 7.0       | 10.4     |          | 7.1        | 5.2   | 7.1   | 7.5   | 6.4   | 4.3   | 7.2   | 7.5   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.1                |      |       |       |       |     |      | 4.1       | .0       |          | 5.3        | 5.2   | 6.0   | 2.8   | 3.3   | 1.1   | 3.3   | 2.0   |
| TOT OBS  | 876                | 3550 | 3011  | 556   | 38    | 0   | 8031 |           | 10.9     |          | 1616       | 97    | 1687  | 684   | 1526  | 94    | 1540  | 787   |
| TOT PCT  | 10.9               | 44.2 | 37.5  | 6.9   | .5    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 4.2  | 9.3                | 3.2   | .4    | .0       |      | 17.2         | 11.5        | 18.4        | 16.2       | 16.6     | 17.7     |  |
| NE       | 6.9  | 22.4               | 8.7   | .6    | .0       |      | 38.7         | 12.2        | 37.6        | 38.9       | 37.6     | 40.2     |  |
| E        | 3.6  | 5.8                | 1.3   | .1    | .0       |      | 10.8         | 10.0        | 10.4        | 11.0       | 11.2     | 10.8     |  |
| SE       | 2.0  | 2.1                | .7    | .1    | *        |      | 4.9          | 10.0        | 4.4         | 5.0        | 6.2      | 4.4      |  |
| S        | 1.9  | 2.4                | 1.0   | .2    | *        |      | 5.5          | 11.2        | 6.0         | 4.7        | 6.8      | 4.9      |  |
| SW       | 2.3  | 2.7                | 1.1   | .2    | *        |      | 6.2          | 10.7        | 6.2         | 6.5        | 6.3      | 5.9      |  |
| W        | 2.0  | 2.5                | .9    | .2    | .0       |      | 5.5          | 10.3        | 4.8         | 5.5        | 5.9      | 5.9      |  |
| NW       | 2.5  | 3.2                | 1.2   | .2    | .0       |      | 7.0          | 10.4        | 7.0         | 7.2        | 6.3      | 7.3      |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 4.1  |                    |       |       |          |      | 4.1          | .0          | 5.3         | 5.1        | 3.1      | 2.9      |  |
| TOT OBS  | 2362 | 4055               | 1448  | 160   | 6        | 8031 |              | 10.9        | 1713        | 2371       | 1620     | 2327     |  |
| TOT PCT  | 29.4 | 50.5               | 18.0  | 2.0   | .1       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0004 CANARY ISLANDS  
28.0N 15.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|--------------------|------|-------|-------|-------|-----|-------|----------|-----------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |          |           |
| 0000Z | 5.3  | 6.9                | 45.4 | 34.7  | 7.2   | .5    | .0  | 10.6  | 100.0    | 1713      |
| 0600Z | 5.1  | 6.7                | 46.0 | 35.9  | 5.8   | .5    | .0  | 10.4  | 100.0    | 2371      |
| 1201Z | 3.1  | 7.0                | 41.9 | 40.1  | 7.6   | .2    | .0  | 11.2  | 100.0    | 1620      |
| 1802Z | 2.9  | 6.7                | 43.1 | 39.3  | 7.4   | .6    | .0  | 11.2  | 100.0    | 2327      |
| TOT   | 329  | 547                | 3550 | 3011  | 556   | 38    | 0   | 10.9  |          | 8031      |
| PCT   | 4.1  | 6.8                | 44.2 | 37.5  | 6.9   | .5    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBS | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|---------|-----------|------------------|
|          |      |      |      |         |           |                  |
| N        | 7.3  | 5.7  | 5.3  | 1.5     |           | 3.6              |
| NE       | 13.5 | 8.8  | 9.4  | 2.6     |           | 3.5              |
| E        | 4.4  | 1.5  | 2.4  | .9      |           | 3.3              |
| SE       | 1.8  | .6   | 1.2  | .9      |           | 4.0              |
| S        | 2.1  | 1.7  | 2.0  | 1.1     |           | 4.2              |
| SW       | 1.9  | 1.9  | 2.6  | .7      |           | 4.3              |
| W        | 1.7  | 1.2  | 2.3  | .9      |           | 4.5              |
| NW       | 2.4  | 1.8  | 1.9  | .6      |           | 3.7              |
| VAR      | .0   | .0   | .0   | .0      |           | .0               |
| CALM     | 4.0  | .7   | .5   | .4      |           | 1.8              |
| TOT OBS  | 1192 | 728  | 841  | 296     | 3057      | 3.6              |
| TOT PCT  | 39.0 | 23.8 | 27.5 | 9.7     | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|------------------|-----------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                  |           |
| .1  | .0  | .*  | .7  | 2.0  | 1.5  | .4   | .2   | .0   | .2    | 14.6             |           |
| .*  | .0  | .2  | .9  | 2.8  | 2.1  | .8   | .4   | .2   | .4    | 26.5             |           |
| .0  | .0  | .0  | .2  | .5   | .5   | .4   | .2   | .1   | .1    | 7.3              |           |
| .1  | .0  | .*  | .3  | .5   | .4   | .2   | .*   | .1   | .*    | 2.9              |           |
| .*  | .*  | .1  | .4  | .9   | .4   | .4   | .1   | .0   | .1    | 4.6              |           |
| .0  | .0  | .1  | .4  | .9   | .5   | .1   | .*   | .1   | .*    | 5.1              |           |
| .0  | .*  | .1  | .4  | .8   | .5   | .2   | .*   | .*   | .*    | 4.0              |           |
| .0  | .0  | .*  | .2  | .8   | .6   | .*   | .*   | .0   | .1    | 5.0              |           |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0               |           |
| .0  | .0  | .0  | .0  | .4   | .2   | .1   | .0   | .0   | .0    | 4.8              |           |
| .6  | 2   | 19  | 102 | 290  | 203  | 80   | 27   | 12   | 31    | 2285             | 3057      |
| .2  | .1  | .6  | 3.3 | 9.5  | 6.6  | 2.6  | .9   | .4   | 1.0   | 74.7             | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |       |       |        |      |
|----------------|-----------|------|------|------|-------|-------|--------|------|
|                | > 10      | > 5  | > 2  | > 1  | > 1/2 | > 1/4 | > 50YD | > 0  |
| > 6500         | 1.1       | 1.4  | 1.4  | 1.4  | 1.4   | 1.4   | 1.4    | 1.4  |
| > 5000         | 1.9       | 2.3  | 2.3  | 2.3  | 2.3   | 2.3   | 2.3    | 2.3  |
| > 3500         | 4.2       | 4.8  | 5.0  | 5.0  | 5.0   | 5.0   | 5.0    | 5.0  |
| > 2000         | 9.7       | 11.4 | 11.6 | 11.6 | 11.6  | 11.6  | 11.6   | 11.6 |
| > 1000         | 17.2      | 20.4 | 21.0 | 21.1 | 21.2  | 21.2  | 21.2   | 21.2 |
| > 600          | 19.8      | 23.6 | 24.2 | 24.4 | 24.5  | 24.5  | 24.5   | 24.5 |
| > 300          | 20.1      | 24.1 | 24.8 | 25.0 | 25.1  | 25.1  | 25.1   | 25.1 |
| > 150          | 20.2      | 24.2 | 24.9 | 25.1 | 25.2  | 25.2  | 25.2   | 25.2 |
| > 0            | 20.3      | 24.4 | 25.1 | 25.3 | 25.4  | 25.4  | 25.4   | 25.4 |
| TOTAL          | 641       | 770  | 794  | 800  | 802   | 802   | 802    | 802  |

TOTAL NUMBER OF OBS: 3159

PCT FREQ NH < 5/8: 74.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|------|------|------|-----|-----|-----|-----|-----|-------|-----------|
| 18.0 | 15.8 | 17.4 | 13.7 | 8.9 | 6.2 | 7.2 | 5.2 | 7.4 | .1    | 3367      |



PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0004 CANARY ISLANDS  
28.0N 15.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | *            |
|              | TOT %  | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | *            |
| 1/2<1        | PCP    | .0   | *    | *   | *   | *   | .0  | .0  | .0  | .0  | .0   | .1    | .1           |
|              | NO PCP | .0   | .1   | .1  | *   | .0  | *   | .0  | .0  | .0  | .0   | .0    | .2           |
|              | TOT %  | *    | .1   | .1  | *   | *   | *   | .0  | .0  | .0  | .0   | .1    | .3           |
| 1<2          | PCP    | *    | .0   | .0  | .0  | .0  | .1  | .0  | *   | .0  | .0   | .1    | .1           |
|              | NO PCP | .0   | *    | *   | .1  | .0  | .0  | .0  | *   | .0  | .0   | .1    | .1           |
|              | TOT %  | *    | *    | *   | .1  | .0  | .1  | .0  | .1  | .0  | .0   | .2    | .2           |
| 2<5          | PCP    | .1   | *    | .1  | *   | .1  | .1  | .1  | *   | .0  | *    | .4    | .4           |
|              | NO PCP | .2   | .2   | .1  | *   | .1  | *   | .1  | .1  | .0  | .1   | 1.0   | 1.0          |
|              | TOT %  | .3   | .2   | .2  | .1  | .2  | .1  | .1  | .1  | .0  | .2   | 1.4   | 1.4          |
| 5<10         | PCP    | .4   | .3   | .1  | .3  | .3  | .2  | .3  | .1  | .0  | .1   | 2.1   | 2.1          |
|              | NO PCP | 2.8  | 5.0  | 1.4 | 1.2 | 1.2 | 1.1 | 1.0 | 1.2 | .0  | .6   | 15.4  | 15.4         |
|              | TOT %  | 3.2  | 5.3  | 1.5 | 1.5 | 1.5 | 1.3 | 1.2 | 1.4 | .0  | .7   | 17.5  | 17.5         |
| 10+          | PCP    | .2   | .3   | *   | .1  | .2  | .1  | .2  | .2  | .0  | .0   | 1.3   | 1.3          |
|              | NO PCP | 15.4 | 28.7 | 7.1 | 3.3 | 5.1 | 5.4 | 4.6 | 5.1 | .0  | 4.4  | 79.2  | 79.2         |
|              | TOT %  | 15.6 | 29.0 | 7.1 | 3.4 | 5.3 | 5.5 | 4.8 | 5.4 | .0  | 4.4  | 80.5  | 80.5         |
| TOT OBS      |        | 3842 |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        | 19.1 | 34.7 | 9.0 | 5.0 | 7.0 | 7.0 | 6.2 | 6.9 | .0  | 5.2  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | *            |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | *            |
| 1/2<1        | 0-3        | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | *            |
|              | 4-10       | *    | *    | .1  | *   | .0  | *   | *   | .0  | .0  | .0   | .2    | .2           |
|              | 11-21      | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | *            |
|              | 22+        | .0   | *    | .0  | *   | *   | .0  | .0  | .0  | .0  | .0   | .1    | .1           |
|              | TOT %      | *    | .1   | .1  | *   | *   | *   | *   | .0  | .0  | .0   | .3    | .3           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0  | .0  | .0   | .0    | *            |
|              | 4-10       | .0   | *    | *   | *   | .0  | *   | .0  | .0  | .0  | .0   | .1    | .1           |
|              | 11-21      | *    | *    | *   | *   | .0  | .0  | .0  | *   | .0  | .0   | .1    | .1           |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | *   | .0  | .0   | .0    | *            |
|              | TOT %      | *    | .1   | *   | *   | .0  | .1  | .0  | *   | .0  | .0   | .3    | .3           |
| 2<5          | 0-3        | *    | *    | *   | .0  | .0  | .0  | .0  | *   | .0  | .2   | .3    | .3           |
|              | 4-10       | .2   | .1   | *   | *   | .1  | .1  | .1  | .1  | .0  | .0   | .6    | .6           |
|              | 11-21      | *    | .1   | *   | *   | .1  | *   | *   | *   | .0  | .0   | .4    | .4           |
|              | 22+        | *    | .1   | .1  | *   | *   | *   | *   | *   | .0  | .0   | .3    | .3           |
|              | TOT %      | .3   | .3   | .2  | *   | .2  | .1  | .1  | .1  | .0  | .2   | 1.3   | 1.3          |
| 5<10         | 0-3        | .1   | .3   | .1  | .1  | .1  | .1  | .1  | .1  | .0  | .7   | 1.7   | 1.7          |
|              | 4-10       | 1.2  | 2.0  | .7  | .4  | .5  | .4  | .5  | .5  | .0  | .0   | 6.2   | 6.2          |
|              | 11-21      | 1.1  | 2.1  | .4  | .4  | .4  | .4  | .3  | .5  | .0  | .0   | 5.7   | 5.7          |
|              | 22+        | .4   | .5   | .1  | .2  | .3  | .1  | .1  | .1  | .0  | .0   | 1.8   | 1.8          |
|              | TOT %      | 2.8  | 4.8  | 1.4 | 1.1 | 1.3 | 1.0 | 1.0 | 1.2 | .0  | .7   | 15.3  | 15.3         |
| 10+          | 0-3        | 1.1  | 1.1  | .7  | .3  | .5  | .5  | .4  | .5  | .0  | 3.8  | 9.0   | 9.0          |
|              | 4-10       | 7.2  | 12.4 | 4.2 | 1.7 | 2.3 | 2.8 | 2.6 | 3.2 | .0  | .0   | 36.5  | 36.5         |
|              | 11-21      | 6.7  | 15.8 | 2.6 | 1.0 | 1.6 | 1.4 | 1.3 | 1.3 | .0  | .0   | 31.7  | 31.7         |
|              | 22+        | 1.2  | 2.5  | .2  | .2  | .3  | .3  | .3  | .4  | .0  | .0   | 5.3   | 5.3          |
|              | TOT %      | 16.2 | 31.8 | 7.7 | 3.2 | 4.9 | 5.0 | 4.6 | 5.4 | .0  | 3.8  | 82.6  | 82.6         |
| TOT OBS      |            | 5571 |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            | 19.4 | 37.0 | 9.4 | 4.4 | 6.3 | 6.2 | 5.7 | 6.8 | .0  | 4.6  | 100.0 |              |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .1         | .0         | .4         | 2.1        | 8.4          | 6.3          | 2.7          | .5           | .5           | .4    | 21.5  | 78.5                | 805          |
| 06009         | .4         | .1         | .9         | 3.0        | 9.0          | 6.3          | 2.0          | 1.0          | .8           | .8    | 24.2  | 75.8                | 799          |
| 12015         | .3         | .1         | 1.0        | 3.6        | 9.0          | 6.0          | 2.8          | 1.2          | .2           | 1.5   | 25.7  | 74.3                | 869          |
| 18021         | .0         | .0         | .0         | 3.9        | 10.5         | 7.2          | 2.8          | .7           | .0           | 1.3   | 26.5  | 73.5                | 819          |
| TOT           | 7          | 2          | 19         | 104        | 304          | 212          | 85           | 28           | 12           | 39    | 806   | 2486                | 3292         |
| PCT           | .2         | .1         | .6         | 3.2        | 9.2          | 6.4          | 2.6          | .9           | .4           | 1.0   | 24.5  | 75.5                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .1    | .4  | 2.0 | 14.8 | 82.7 | 1315         |
| 06009         | .0   | .3    | .3  | 1.7 | 17.2 | 80.6 | 1572         |
| 12015         | .0   | .2    | .2  | 1.4 | 13.3 | 85.0 | 1302         |
| 18021         | .0   | .0    | .3  | 1.2 | 16.5 | 81.4 | 1541         |
| TOT           | 1    | 16    | 16  | 89  | 893  | 4715 | 5730         |
| PCT           | .0   | .3    | .3  | 1.6 | 15.6 | 82.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .1            | .5         | 4.1         | 19.3            | 76.6               | 757          |
| 06009         | .4            | 1.4        | 6.2         | 20.0            | 73.8               | 760          |
| 12015         | .4            | 1.5        | 6.3         | 20.4            | 73.3               | 843          |
| 18021         | .0            | .3         | 5.8         | 21.8            | 72.5               | 799          |
| TOT           | 7             | 30         | 177         | 644             | 2338               | 3159         |
| PCT           | .2            | .9         | 5.6         | 20.4            | 74.0               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | .0    | .1    | .0    | .0     | 2            | .1          |
| 75/79  | .0   | .0    | .1    | .2    | .5    | 1.3   | .8    | .2     | 75           | 2.6         |
| 70/74  | .0   | .0    | .1    | 1.4   | 8.6   | 18.6  | 11.8  | 4.4    | 1305         | 45.0        |
| 65/69  | .0   | .0    | .1    | 1.9   | 10.5  | 18.0  | 14.1  | 4.3    | 1420         | 49.0        |
| 60/64  | .0   | .0    | .0    | .0    | .6    | .9    | 1.1   | .7     | 97           | 3.3         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | .0          |
| TOTAL  | 0    | 0     | 10    | 100   | 585   | 1129  | 795   | 281    | 2900         | 100.0       |
| PCT    | .0   | .0    | .3    | 3.4   | 20.2  | 38.9  | 27.4  | 9.7    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 80/84 | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 75/79 | .5   | .7   | .2  | .0  | .3  | .4  | .2  | .1  | .0  | .2   |
| 70/74 | 7.2  | 15.6 | 5.7 | 2.1 | 3.7 | 3.5 | 3.2 | 2.8 | .0  | 1.2  |
| 65/69 | 10.8 | 19.3 | 3.6 | 1.7 | 2.7 | 3.0 | 3.1 | 3.2 | .0  | 1.6  |
| 60/64 | .8   | 1.2  | .1  | .2  | .2  | .2  | .4  | .2  | .0  | .0   |
| 55/59 | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| TOTAL | 19.4 | 36.9 | 9.6 | 4.1 | 6.9 | 7.1 | 6.9 | 6.3 | .0  | 2.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 74  | 72  | 69  | 64 | 62 | 50  | 68.5 | 1751         |
| 06009         | 82  | 74  | 72  | 68  | 64 | 62 | 50  | 68.2 | 2384         |
| 12015         | 84  | 79  | 76  | 71  | 66 | 62 | 52  | 70.8 | 1607         |
| 18021         | 84  | 77  | 75  | 70  | 65 | 63 | 50  | 69.8 | 2322         |
| TOT           | 84  | 77  | 74  | 69  | 65 | 62 | 50  | 69.2 | 8064         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.1   | 15.5  | 40.9  | 28.9  | 12.6   | 78   | 748          |
| 06009         | .0   | 2.0   | 18.7  | 34.5  | 33.3  | 11.6   | 78   | 766          |
| 12015         | .0   | 7.7   | 26.6  | 40.5  | 18.7  | 6.5    | 74   | 743          |
| 18021         | .0   | 3.5   | 20.2  | 38.7  | 28.7  | 8.8    | 76   | 762          |
| TOT           | 0    | 115   | 611   | 1166  | 829   | 298    | 76   | 3019         |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | N<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0       | 2     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .0        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0       | .0       | 2     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .0       | .0       | 11    | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .0       | .0       | .1       | .3       | .1       | .0       | 21    | .0       | .6        |
| 6                  | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .0       | 8     | .0       | .2        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .3       | .7       | .2       | .0       | 46    | .0       | 1.2       |
| 4                  | .0       | .0       | .0       | .0       | .3       | .7       | .8       | .1       | .0       | 72    | .0       | 2.0       |
| 3                  | .0       | .0       | .0       | .0       | .2       | .7       | 1.6      | .1       | .0       | 96    | .0       | 2.6       |
| 2                  | .0       | .0       | .0       | .1       | 1.5      | 2.3      | 2.3      | .1       | .0       | 227   | .0       | 6.2       |
| 1                  | .0       | .0       | .0       | .1       | 1.2      | 6.0      | 2.0      | .0       | .0       | 338   | .1       | 9.3       |
| 0                  | .0       | .0       | .0       | .5       | 3.8      | 10.7     | 1.6      | .0       | .0       | 601   | .1       | 16.4      |
| -1                 | .0       | .0       | .0       | .5       | 4.4      | 11.8     | .8       | .0       | .0       | 634   | .1       | 17.4      |
| -2                 | .0       | .0       | .0       | .7       | 6.3      | 8.4      | .4       | .0       | .0       | 581   | .0       | 16.0      |
| -3                 | .0       | .0       | .0       | .3       | 6.6      | 4.5      | .1       | .0       | .0       | 416   | .0       | 11.4      |
| -4                 | .0       | .0       | .1       | .7       | 3.8      | 2.3      | .1       | .0       | .0       | 255   | .0       | 7.0       |
| -5                 | .0       | .0       | .0       | .6       | 2.5      | 1.0      | .0       | .0       | .0       | 148   | .0       | 4.1       |
| -6                 | .0       | .0       | .0       | .4       | .7       | .3       | .0       | .0       | .0       | 51    | .0       | 1.4       |
| -7/-8              | .0       | .0       | .0       | .6       | .9       | .3       | .0       | .0       | .0       | 67    | .0       | 1.8       |
| -9/-10             | .0       | .0       | .0       | .2       | .2       | .1       | .0       | .0       | .0       | 18    | .0       | .5        |
| -11/-13            | .0       | .0       | .2       | .2       | .1       | .0       | .0       | .0       | .0       | 17    | .0       | .5        |
| -14/-16            | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 6     | .0       | .1        |
| -17/-19            | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 3     | .1       | .0        |
| -20/-22            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 5     | .1       | .1        |
| TOTAL              | 6        | 16       | 172      | 1193     | 1802     | 401      | 27       | 3        | 3        | 3626  | .6       | 3606      |
| PCT                | .2       | .2       | .4       | 4.7      | 32.9     | 49.7     | 11.1     | .7       | .1       | 100.0 | .6       | 99.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | 1.2  | .1    | .0    | .0    | .0  | 1.8  | .5  | 1.4  | .1    | .0    | .0    | .0  | 2.1  |
| 1-2     | .2  | 4.8  | 1.6   | .0    | .0    | .0  | 6.7  | .2  | 6.7  | 3.6   | .0    | .0    | .0  | 10.5 |
| 3-4     | .0  | 1.8  | 2.8   | .1    | .0    | .0  | 4.8  | .0  | 3.4  | 7.1   | .4    | .0    | .0  | 11.0 |
| 5-6     | .0  | .6   | 2.9   | .4    | .0    | .0  | 3.8  | .0  | .8   | 5.8   | .8    | .0    | .0  | 7.5  |
| 7       | .0  | .1   | .8    | .5    | .0    | .0  | 1.4  | .0  | .1   | 2.2   | .6    | .0    | .0  | 2.9  |
| 8-9     | .0  | .0   | .4    | .2    | .0    | .0  | .6   | .0  | .0   | .5    | .5    | .0    | .0  | 1.0  |
| 10-11   | .0  | .0   | .1    | .3    | .0    | .0  | .4   | .0  | .0   | .1    | .2    | .0    | .0  | .3   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .1    | .3    | .0    | .0  | .3   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .8  | 8.4  | 8.8   | 1.9   | .0    | .0  | 19.9 | .8  | 12.5 | 19.5  | 2.7   | .1    | .0  | 35.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .3  | .6   | .1    | .0    | .0    | .0  | 1.0 | .1  | .5   | .0    | .0    | .0    | .0  | .6  |
| 1-2     | .1  | 2.2  | 1.0   | .0    | .0    | .0  | 3.3 | .1  | 1.0  | .5    | .0    | .0    | .0  | 1.6 |
| 3-4     | .0  | .9   | 1.1   | .2    | .0    | .0  | 2.2 | .0  | .5   | .6    | .0    | .0    | .0  | 1.1 |
| 5-6     | .0  | .1   | 1.1   | .3    | .0    | .0  | 1.5 | .0  | .1   | .5    | .2    | .0    | .0  | .7  |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .3  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 3.8  | 3.6   | .6    | .0    | .0  | 8.4 | .2  | 2.1  | 1.7   | .4    | .0    | .0  | 4.4 |



PERIOD: (OVER-ALL) 1963-1973

NOVEMBER  
TABLE 18 (CONT)AREA 0004 CANARY ISLANDS  
28.0N 15.0W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .5  | .4   | .0    | .0    | .0    | .0  | .9  | .5  | .8   | .0    | .0    | .0    | .0  | 1.3 |
| 1-2     | .2  | 1.7  | .4    | .0    | .0    | .0  | 2.3 | .1  | 1.8  | .4    | .0    | .0    | .0  | 2.3 |
| 3-4     | .0  | .6   | 1.2   | .0    | .0    | .0  | 1.8 | .0  | .8   | .9    | .0    | .0    | .0  | 1.8 |
| 5-6     | .0  | .1   | .6    | .1    | .0    | .0  | .8  | .0  | .2   | .4    | .1    | .0    | .0  | .7  |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .2  | .0  | .0   | .3    | .1    | .0    | .0  | .4  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 2.8  | 2.4   | .4    | .1    | .0  | 6.4 | .7  | 3.6  | 2.0   | .3    | .0    | .0  | 6.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .7   | .0    | .0    | .0    | .0  | .9  | .1  | .4   | .0    | .0    | .0    | .0  | .5  |           |
| 1-2     | .1  | 1.8  | .2    | .0    | .0    | .0  | 2.1 | .1  | 2.1  | .3    | .0    | .0    | .0  | 2.5 |           |
| 3-4     | .0  | .4   | .5    | .1    | .0    | .0  | 1.0 | .0  | 1.0  | .9    | .0    | .0    | .0  | 2.0 |           |
| 5-6     | .0  | .0   | .5    | .2    | .0    | .0  | .7  | .0  | .2   | .7    | .1    | .0    | .0  | 1.1 |           |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .2    | .0    | .0    | .0  | .3  |           |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | 3.0  | 1.3   | .4    | .0    | .0  | 4.9 | .2  | 3.7  | 2.2   | .4    | .0    | .0  | 6.5 | 92.8      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 10.9 | 6.0  | .3    | .0    | .0    | .0  | 17.2  |         |
| 1-2     | 1.4  | 22.1 | 7.9   | .0    | .0    | .0  | 31.4  |         |
| 3-4     | .1   | 9.3  | 14.9  | .9    | .0    | .0  | 25.2  |         |
| 5-6     | .0   | 2.0  | 12.2  | 2.0   | .0    | .0  | 16.2  |         |
| 7       | .0   | .2   | 4.1   | 1.5   | .0    | .0  | 5.8   |         |
| 8-9     | .0   | .0   | .9    | 1.1   | .0    | .0  | 2.1   |         |
| 10-11   | .0   | .0   | .3    | 1.7   | .1    | .0  | 1.0   |         |
| 12      | .0   | .0   | .0    | .3    | .0    | .0  | .3    |         |
| 13-16   | .0   | .0   | .1    | .4    | .1    | .0  | .7    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 12.5 | 39.6 | 40.6  | 7.0   | .3    | .0  | 100.0 | 2295    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.3 | 12.3 | 12.3 | 6.4  | 2.9  | .6  | .3    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 978   | 3        |
| 6-7          | .0  | 1.5  | 5.8  | 6.2  | 3.0  | 1.9 | 1.0   | .3  | .8    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 548   | 6        |
| 8-9          | .0  | .3   | 1.3  | 2.2  | 2.7  | 1.6 | .8    | .4  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 253   | 7        |
| 10-11        | .0  | .6   | .8   | .8   | .5   | .9  | .3    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 112   | 6        |
| 12-13        | .0  | .0   | .6   | .6   | .3   | .3  | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 68    | 7        |
| >13          | .0  | .0   | .0   | .3   | .2   | .0  | .1    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 21    | 8        |
| INDET        | 6.2 | 4.4  | 5.0  | 3.9  | 2.7  | 1.3 | .5    | .4  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 653   | 4        |
| TOTAL        | 223 | 303  | 680  | 540  | 324  | 177 | 90    | 37  | 48    | 9     | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2633  | 4        |
| PCT          | 8.5 | 19.1 | 25.8 | 20.5 | 12.3 | 6.7 | 3.4   | 1.4 | 1.8   | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

DECEMBER

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |           |        |      |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------|--------|------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | BLWG DUST | NO SIG | WEA  |  |
| N                  | .9   | 2.1       | 1.0  | .0        | .0   | .0              | .2   | 4.0             | 2.4            | .1                      | .2          | .1                  | .3         | .0        | .0     | 93.0 |  |
| NE                 | .5   | 1.1       | .7   | .0        | .0   | .0              | .0   | 2.3             | 1.8            | .5                      | .4          | .0                  | .2         | .1        | .1     | 94.8 |  |
| E                  | 1.6  | .3        | .6   | .0        | .0   | .0              | .0   | 2.5             | 1.0            | .7                      | .4          | .0                  | 1.3        | .0        | .0     | 94.1 |  |
| SE                 | .8   | .0        | .0   | .0        | .0   | .0              | .0   | .8              | .0             | .4                      | .0          | .0                  | .2         | .0        | .0     | 98.6 |  |
| S                  | .0   | 2.6       | .8   | .0        | .0   | .0              | .0   | 3.3             | 7.7            | .0                      | 1.0         | .0                  | 1.0        | .0        | .0     | 87.0 |  |
| SW                 | 3.3  | 7.0       | .2   | .0        | .0   | .0              | .0   | 10.5            | 1.4            | 1.4                     | 3.3         | .0                  | .0         | .0        | .0     | 84.9 |  |
| W                  | 1.8  | 6.0       | .5   | .0        | .0   | .0              | .0   | 8.4             | 3.4            | .4                      | .4          | .0                  | .0         | .0        | .0     | 87.9 |  |
| NW                 | 2.1  | 3.2       | 1.2  | .0        | .0   | .0              | .1   | 6.6             | 7.0            | .5                      | .0          | .0                  | .5         | .0        | .0     | 85.4 |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0        | .0     | .0   |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 3.1         | .0                  | .0         | .0        | .0     | 96.9 |  |
| TOT PCT            | .9   | 1.6       | .7   | .0        | .0   | .0              | .1   | 3.2             | 2.1            | .5                      | .5          | *                   | .4         | *         | *      | 93.4 |  |
| TOT OBS:           | 3960 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |           |        |      |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |              |           |      |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|--------------|-----------|------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | BLWG<br>DUST | NO<br>SIG | WEA  |
| 0000          | 1.0                | 1.4          | .8   | .0           | .0   | .0                    | .0   | 3.3                     | 2.0               | .8           | .2                | .0                        | .3            | .0           | .0        | 93.4 |
| 0600          | 1.2                | 1.4          | .9   | .0           | .0   | .0                    | .2   | 3.7                     | 1.9               | .6           | .5                | .0                        | .0            | .1           | .1        | 93.5 |
| 1200          | .6                 | 1.7          | .6   | .0           | .0   | .0                    | .0   | 2.8                     | 2.9               | .0           | .6                | .0                        | .6            | .0           | .0        | 93.2 |
| 1800          | .9                 | 2.1          | .5   | .0           | .0   | .0                    | .0   | 3.4                     | 1.9               | .5           | .5                | .1                        | .5            | .0           | .0        | 93.3 |
| TOT PCT       | .9                 | 1.7          | .7   | .0           | .0   | .0                    | *    | 3.3                     | 2.2               | .5           | .5                | *                         | .3            | *            | *         | 93.4 |
| TOT OBS:      | 4098               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |              |           |      |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |  |  |
|----------|--------------------|------|-------|-------|-------|----|------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|--|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21    |  |  |
| N        | 1.1                | 7.6  | 7.0   | 1.7   | .1    | .0 |      | 17.6  | 12.2      | 17.6     | 29.2     | 17.8       | 16.1  | 17.5  | 20.7  | 19.4  | 14.1  |  |  |
| NE       | 1.6                | 17.2 | 20.0  | 4.1   | .3    | .0 |      | 43.2  | 12.7      | 47.0     | 45.8     | 42.5       | 39.7  | 43.1  | 46.6  | 42.0  | 41.7  |  |  |
| E        | .9                 | 7.7  | 5.2   | .6    | .0    | .0 |      | 14.4  | 10.4      | 13.2     | 7.2      | 14.7       | 17.1  | 14.9  | 15.4  | 13.0  | 16.3  |  |  |
| SE       | .4                 | 2.5  | 1.2   | .2    | *     | .0 |      | 4.3   | 9.5       | 3.0      | .0       | 4.6        | 4.6   | 4.8   | .7    | 4.7   | 5.7   |  |  |
| S        | .6                 | 1.7  | .6    | .2    | *     | .0 |      | 3.1   | 8.5       | 2.8      | 3.6      | 2.7        | 3.0   | 3.2   | 3.4   | 3.8   | 3.1   |  |  |
| SW       | .5                 | 2.1  | 1.3   | .3    | *     | .0 |      | 4.2   | 9.9       | 3.4      | 3.1      | 3.8        | 5.7   | 4.1   | 4.1   | 4.7   | 5.4   |  |  |
| W        | .5                 | 1.8  | 1.4   | .4    | .1    | .0 |      | 4.2   | 11.5      | 3.5      | 3.1      | 4.4        | 4.4   | 4.3   | 4.3   | 4.4   | 4.4   |  |  |
| NW       | .5                 | 2.9  | 1.5   | .5    | .1    | .0 |      | 5.4   | 10.9      | 5.1      | 5.8      | 5.3        | 5.8   | 4.9   | 3.8   | 5.8   | 6.6   |  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    |  |  |
| CALM     | 3.5                |      |       |       |       |    |      | 3.5   | .0        | 4.4      | 2.2      | 4.4        | 3.7   | 3.2   | 1.0   | 2.3   | 2.7   |  |  |
| TOT OBS  | 782                | 3573 | 3141  | 659   | 46    | 0  | 8201 |       | 11.3      | 1700     | 90       | 1638       | 697   | 1512  | 104   | 1583  | 877   |  |  |
| TOT PCT  | 9.5                | 43.6 | 38.3  | 8.0   | .6    | .0 |      | 100.0 |           | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GHT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 4.2                | 9.1  | 3.7   | .7    | .0  |           | 17.6     | 12.2     | 18.2       | 17.3  | 17.7  | 17.5  |
| NE       | 7.3                | 24.4 | 10.1  | 1.5   | *   |           | 43.2     | 12.7     | 46.9       | 41.6  | 43.4  | 41.9  |
| E        | 3.9                | 8.3  | 2.1   | .1    | .0  |           | 14.4     | 10.4     | 12.9       | 15.4  | 14.9  | 14.2  |
| SE       | 1.7                | 2.0  | .6    | *     | *   |           | 4.3      | 9.5      | 2.9        | 4.6   | 4.5   | 5.1   |
| S        | 1.6                | 1.2  | .3    | *     | *   |           | 3.1      | 8.5      | 2.8        | 2.8   | 3.2   | 3.5   |
| SW       | 1.7                | 1.8  | .7    | .1    | .0  |           | 4.2      | 9.9      | 3.4        | 4.3   | 4.1   | 4.9   |
| W        | 1.4                | 1.7  | .8    | .2    | .0  |           | 4.2      | 11.5     | 3.5        | 4.4   | 4.3   | 4.4   |
| NW       | 1.9                | 2.4  | .8    | .3    | *   |           | 5.4      | 10.9     | 5.1        | 5.4   | 4.8   | 6.1   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 3.5                |      |       |       |     |           | 3.5      | .0       | 4.2        | 4.2   | 3.1   | 2.4   |
| TOT OBS  | 2225               | 4179 | 1558  | 235   | 4   | 8201      |          | 11.3     | 1790       | 2333  | 1616  | 2460  |
| TOT PCT  | 27.1               | 51.0 | 19.0  | 2.9   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 5.8  | 5.4  | 7.9  | 2.7       | 4.3       |                  |
| NE       | 15.8 | 10.4 | 16.6 | 5.0       | 4.0       |                  |
| E        | 5.7  | 1.8  | 2.9  | 1.2       | 3.2       |                  |
| SE       | 1.7  | .4   | .7   | .1        | 2.7       |                  |
| S        | .7   | .4   | .8   | .3        | 4.4       |                  |
| SW       | .5   | .2   | .9   | .4        | 4.9       |                  |
| W        | .7   | .8   | 1.3  | .5        | 4.8       |                  |
| NW       | .9   | 1.4  | 1.9  | .5        | 4.5       |                  |
| VAR      | .0   | .0   | .0   | .0        | .0        |                  |
| CALM     | 2.2  | .4   | .6   | .4        | 2.4       |                  |
| TOT OBS  | 1076 | 673  | 1064 | 355       | 3168      | 3.9              |
| TOT PCT  | 34.0 | 21.2 | 33.6 | 11.2      | 100.0     |                  |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 5.8  | 5.4  | 7.9  | 2.7       | 4.3       |                  |
| NE       | 15.8 | 10.4 | 16.6 | 5.0       | 4.0       |                  |
| E        | 5.7  | 1.8  | 2.9  | 1.2       | 3.2       |                  |
| SE       | 1.7  | .4   | .7   | .1        | 2.7       |                  |
| S        | .7   | .4   | .8   | .3        | 4.4       |                  |
| SW       | .5   | .2   | .9   | .4        | 4.9       |                  |
| W        | .7   | .8   | 1.3  | .5        | 4.8       |                  |
| NW       | .9   | 1.4  | 1.9  | .5        | 4.5       |                  |
| VAR      | .0   | .0   | .0   | .0        | .0        |                  |
| CALM     | 2.2  | .4   | .6   | .4        | 2.4       |                  |
| TOT OBS  | 1076 | 673  | 1064 | 355       | 3168      | 3.9              |
| TOT PCT  | 34.0 | 21.2 | 33.6 | 11.2      | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|------------------|-----------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                  |           |
| .0  | .0  | .1  | 1.0 | 3.0  | 2.8  | 1.4  | .2   | .1   | .2    | 12.8             |           |
| .0  | .0  | .2  | 1.7 | 5.8  | 5.5  | 2.5  | .6   | .2   | .5    | 30.8             |           |
| .0  | .0  | .3  | 1.0 | .7   | .4   | .1   | .2   | .2   | .8    | 8.8              |           |
| .0  | .0  | .0  | .1  | .2   | .1   | .1   | .0   | .0   | .0    | 2.3              |           |
| .0  | .0  | .0  | .1  | .2   | .2   | .1   | .0   | .0   | .0    | 1.5              |           |
| .0  | .0  | .0  | .1  | .3   | .4   | .1   | .0   | .0   | .0    | 1.2              |           |
| .0  | .0  | .1  | .2  | .4   | .3   | .3   | .0   | .1   | .0    | 1.9              |           |
| .0  | .0  | .1  | .2  | .6   | .5   | .2   | .0   | .0   | .0    | 3.1              |           |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0               |           |
| .1  | .0  | .0  | .1  | .2   | .2   | .2   | .0   | .1   | .1    | 2.7              |           |
| .4  | .0  | .19 | 114 | 371  | 342  | 168  | 32   | 22   | 31    | 2065             | 3168      |
| .1  | .0  | .6  | 3.6 | 11.7 | 10.8 | 5.3  | 1.0  | .7   | 1.0   | 65.2             | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM) | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|-----------|---------|-----------|-----------|------------|---------|
| = OR >6500     | 1.5      | 1.6     | 1.7     | 1.7       | 1.7     | 1.7       | 1.7       | 1.7        | 1.7     |
| = OR >5000     | 2.4      | 2.7     | 2.7     | 2.7       | 2.7     | 2.7       | 2.7       | 2.7        | 2.7     |
| = OR >3500     | 6.9      | 7.8     | 7.9     | 7.9       | 7.9     | 7.9       | 7.9       | 7.9        | 7.9     |
| = OR >2000     | 16.3     | 18.4    | 18.7    | 18.8      | 18.8    | 18.8      | 18.8      | 18.8       | 18.8    |
| = OR >1000     | 26.6     | 29.9    | 30.4    | 30.5      | 30.5    | 30.5      | 30.5      | 30.5       | 30.5    |
| = OR >600      | 29.9     | 33.6    | 34.1    | 34.2      | 34.2    | 34.2      | 34.2      | 34.2       | 34.2    |
| = OR >300      | 30.3     | 34.1    | 34.7    | 34.8      | 34.8    | 34.8      | 34.8      | 34.8       | 34.8    |
| = OR >150      | 30.3     | 34.1    | 34.7    | 34.8      | 34.8    | 34.8      | 34.8      | 34.8       | 34.8    |
| = OR >0        | 30.3     | 34.2    | 34.8    | 34.9      | 34.9    | 34.9      | 34.9      | 34.9       | 34.9    |
| TOTAL          | 965      | 1110    | 1131    | 1133      | 1134    | 1135      | 1135      | 1135       | 1135    |

TOTAL NUMBER OF OBS: 3248

PCT FREQ NH < 5/8: 65.1

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|------|------|------|------|-----|-----|-----|-----|-------|-----------|
| 16.7 | 11.1 | 13.3 | 13.1 | 10.1 | 7.5 | 9.8 | 8.9 | 9.3 | .1    | 3478      |



PERIOD: (PRIMARY) 1920-1973  
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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |      |
|--------------|--------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |      |
|              | NO PCP | *    | .0   | .0   | .0  | .0  | .0  | .0  | *   | .0  | *    | .1    |              |      |
|              | TOT %  | *    | .0   | .0   | .0  | .0  | .0  | .0  | *   | .0  | *    | .1    |              |      |
| 1/2<1        | PCP    | *    | *    | .0   | .0  | *   | .1  | .1  | .0  | .0  | .0   | .2    |              |      |
|              | NO PCP | .0   | *    | .0   | .0  | .0  | .1  | *   | .0  | .0  | .0   | .1    |              |      |
|              | TOT %  | *    | *    | .0   | .0  | *   | .2  | .1  | .0  | .0  | .0   | .3    |              |      |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | *   | .0  | .0  | .0  | .0   | *     |              |      |
|              | NO PCP | *    | *    | .1   | .0  | *   | .0  | .0  | .0  | .0  | .0   | .2    |              |      |
|              | TOT %  | *    | *    | .1   | .0  | *   | *   | .0  | .0  | .0  | .0   | .2    |              |      |
| 2<5          | PCP    | .1   | .0   | .0   | .0  | .0  | *   | *   | *   | .0  | .0   | .1    |              |      |
|              | NO PCP | .2   | .3   | .1   | .0  | .1  | .1  | *   | .1  | .0  | .1   | 1.0   |              |      |
|              | TOT %  | .3   | .3   | .1   | .0  | .1  | .1  | .1  | .1  | .0  | .1   | 1.1   |              |      |
| 5<10         | PCP    | .4   | .5   | .1   | .0  | *   | .1  | .1  | .1  | .0  | .0   | 1.4   |              |      |
|              | NO PCP | 2.7  | 5.9  | 2.2  | .7  | .5  | .6  | .6  | .7  | .0  | .3   | 14.3  |              |      |
|              | TOT %  | 3.1  | 6.5  | 2.3  | .7  | .6  | .7  | .7  | .8  | .0  | .3   | 15.7  |              |      |
| 10+          | PCP    | .4   | .5   | .2   | *   | *   | .1  | .1  | .2  | .0  | .0   | 1.5   |              |      |
|              | NO PCP | 17.3 | 39.3 | 9.4  | 2.6 | 1.7 | 1.7 | 2.6 | 3.7 | .0  | 2.9  | 81.2  |              |      |
|              | TOT %  | 17.7 | 39.8 | 9.6  | 2.6 | 1.8 | 1.8 | 2.7 | 3.9 | .0  | 2.9  | 82.7  |              |      |
| TOT OBS      |        |      |      |      |     |     |     |     |     |     |      |       |              | 3947 |
| TOT PCT      |        |      |      |      |     |     |     |     |     |     |      |       |              |      |
|              |        | 21.2 | 46.7 | 12.1 | 3.3 | 2.5 | 2.7 | 3.6 | 4.9 | .0  | 3.2  | 100.0 |              |      |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *.0  | .0   | .0   | .0  | .0  | *   | *   | *   | .0  |      | .1    |              |
|              | 11-21      | .0   | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  |      | *     |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  |      | .0    |              |
|              | TOT %      | *    | *    | .0   | .0  | .0  | *   | *   | *   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | 11-21      | *    | *    | .0   | .0  | .0  | .1  | *   | .0  | .0  |      | .1    |              |
|              | 22+        | .0   | .0   | .0   | .0  | *   | *   | *   | .0  | .0  |      | .1    |              |
|              | TOT %      | *    | *    | .0   | .0  | *   | .1  | *   | .0  | .0  | .0   | .2    |              |
| 1<2          | 0-3        | *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | .0   | .0   | *    | .0  | .0  | .0  | *   | .0  | .0  | .0   | .1    |              |
|              | 11-21      | *    | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | *    | *   | *   | *   | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | *    | *    | .1   | *   | *   | *   | *   | .0  | .0  | .0   | .2    |              |
| 2<5          | 0-3        | *    | .1   | .0   | .0  | *   | *   | .0  | *   | .0  | .1   | .3    |              |
|              | 4-10       | .1   | *    | .1   | .0  | *   | .1  | *   | *   | .0  | .0   | .3    |              |
|              | 11-21      | .2   | .2   | .1   | .0  | .0  | *   | .1  | *   | .0  | .0   | .6    |              |
|              | 22+        | *    | *    | .0   | .0  | *   | .0  | *   | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .3   | .3   | .2   | .0  | .1  | .1  | .1  | .1  | .0  | .1   | 1.3   |              |
| 5<10         | 0-3        | .2   | .3   | .1   | *   | .1  | .2  | .1  | .1  | .0  | .3   | 1.4   |              |
|              | 4-10       | 1.0  | 1.9  | 1.0  | .4  | .3  | .3  | .2  | .4  | .0  | .0   | 5.5   |              |
|              | 11-21      | 1.2  | 2.7  | .8   | .1  | .2  | .2  | .2  | .3  | .0  | .0   | 5.7   |              |
|              | 22+        | .3   | .7   | .1   | *   | *   | .1  | .2  | .2  | .0  | .0   | 1.7   |              |
|              | TOT %      | 2.7  | 5.6  | 2.0  | .6  | .6  | .7  | .7  | .9  | .0  | .3   | 14.2  |              |
| 10+          | 0-3        | .6   | 1.3  | .6   | .2  | .4  | .3  | .4  | .3  | .0  | 3.0  | 7.1   |              |
|              | 4-10       | 7.1  | 15.3 | 5.9  | 1.6 | 1.3 | 1.6 | 1.5 | 2.4 | .0  | .0   | 36.7  |              |
|              | 11-21      | 6.7  | 18.3 | 3.8  | 1.1 | .4  | 1.0 | 1.1 | 1.2 | .0  | .0   | 33.5  |              |
|              | 22+        | 1.6  | 3.6  | .4   | .1  | .1  | .1  | .3  | .4  | .0  | .0   | 6.6   |              |
|              | TOT %      | 16.0 | 38.5 | 10.7 | 3.0 | 2.3 | 3.0 | 3.3 | 4.2 | .0  | 3.0  | 83.9  |              |
| TOT OBS      |            |      |      |      |     |     |     |     |     |     |      |       | 5734         |
| TOT PCT      |            |      |      |      |     |     |     |     |     |     |      |       |              |
|              |            | 19.1 | 44.5 | 12.9 | 3.6 | 2.9 | 4.1 | 4.2 | 5.3 | .0  | 3.4  | 100.0 |              |

PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL        | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|---------------------|---------------|
| 00003          | .0         | .0         | 1.0        | 3.2        | 10.4         | 9.8          | 3.9          | .7           | .5           | 1.0      | 30.4         | 69.6                | 825           |
| 06009          | .4         | .0         | .4         | 3.2        | 12.8         | 10.4         | 4.9          | .9           | .7           | 1.1      | 34.7         | 65.3                | 758           |
| 12015          | .1         | .0         | .3         | 3.8        | 10.4         | 11.5         | 6.1          | 1.2          | .4           | .8       | 34.7         | 65.3                | 895           |
| 18021          | .0         | .0         | .6         | 4.0        | 11.9         | 10.3         | 5.1          | 1.1          | 1.0          | 1.0      | 34.9         | 65.1                | 902           |
| TOT<br>PCT     | 4<br>.1    | 0<br>.0    | 19<br>.6   | 120<br>3.6 | 383<br>11.3  | 356<br>10.5  | 170<br>5.0   | 34<br>1.0    | 22<br>.7     | 32<br>.9 | 1140<br>33.7 | 2240<br>66.3        | 3380<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1    | 1<2      | 2<5       | 5<10        | 10+          | TOTAL<br>OBS  |
|----------------|---------|----------|----------|-----------|-------------|--------------|---------------|
| 00003          | .1      | .2       | .3       | 1.7       | 13.9        | 83.7         | 1341          |
| 06009          | .0      | .3       | .1       | 1.4       | 16.1        | 82.1         | 1537          |
| 12015          | .1      | .2       | .2       | 1.4       | 11.9        | 86.2         | 1328          |
| 18021          | .1      | .1       | .3       | .9        | 15.6        | 83.0         | 1671          |
| TOT<br>PCT     | 5<br>.1 | 12<br>.2 | 14<br>.2 | 77<br>1.3 | 853<br>14.5 | 4916<br>83.6 | 5877<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|---------------|------------|-------------|-----------------|--------------------|---------------|
| 00003          | .0            | 1.0        | 5.7         | 26.9            | 67.5               | 778           |
| 06009          | .4            | .8         | 5.2         | 31.4            | 63.4               | 724           |
| 12015          | .1            | .6         | 5.6         | 30.6            | 63.8               | 872           |
| 18021          | .0            | .6         | 5.6         | 30.8            | 63.6               | 874           |
| TOT<br>PCT     | 4<br>.1       | 24<br>.7   | 180<br>5.5  | 972<br>29.9     | 2096<br>64.5       | 3248<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | .0    | .1    | .1    | .1    | .0    | .0     | 9            | .3          |
| 70/74  | .0   | .0    | .1    | .9    | 2.2   | 1.8   | 1.2   | .4     | 201          | 6.7         |
| 65/69  | .0   | .4    | 5.8   | 20.2  | 23.4  | 12.8  | 4.2   | 1.9    | 1997         | 66.9        |
| 60/64  | .0   | .0    | .3    | 2.5   | 7.6   | 8.7   | 5.0   | 1.8    | 771          | 25.8        |
| 55/59  | .0   | .0    | .0    | .0    | .1    | .1    | .0    | .0     | 6            | .2          |
| TOTAL  | 0    | 1     | 27    | 277   | 900   | 1014  | 571   | 194    | 2984         | 100.0       |
| PCT    | .0   | .0    | .9    | 9.3   | 30.2  | 34.0  | 19.1  | 6.5    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|------|-----|-----|-----|-----|-----|-----|------|
| .1   | .2   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 1.2  | 2.5  | .7   | .3  | .7  | .7  | .1  | .4  | .0  | .1   |
| 12.8 | 32.4 | 9.5  | 2.4 | 1.7 | 1.4 | 2.4 | 2.4 | .0  | 1.8  |
| 6.5  | 13.1 | 2.3  | .5  | .2  | .2  | 1.0 | 1.7 | .0  | .4   |
| .0   | .2   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 20.7 | 48.3 | 12.5 | 3.2 | 2.6 | 2.3 | 3.5 | 4.5 | .0  | 2.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 79  | 71  | 69  | 65  | 62 | 57 | 46  | 65.3 | 1812         |
| 06009          | 74  | 71  | 69  | 65  | 61 | 57 | 46  | 65.3 | 2346         |
| 12015          | 82  | 76  | 73  | 68  | 63 | 59 | 46  | 67.7 | 1624         |
| 18021          | 79  | 74  | 71  | 66  | 63 | 59 | 46  | 66.5 | 2455         |
| TOT            | 82  | 74  | 71  | 66  | 62 | 58 | 46  | 66.1 | 8237         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 6.6   | 29.4  | 36.4  | 20.9  | 6.7    | 74   | 756          |
| 06009          | .0   | 8.9   | 26.0  | 35.9  | 22.3  | 6.8    | 74   | 730          |
| 12015          | .0   | 16.5  | 31.6  | 31.6  | 14.6  | 5.6    | 70   | 765          |
| 18021          | .0   | 9.4   | 33.3  | 31.2  | 18.8  | 7.3    | 72   | 834          |
| TOT            | 0    | 319   | 932   | 1039  | 590   | 205    | 72   | 3085         |

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PERIOD: (PRIMARY) 1920-1973  
(OVER-ALL) 1855-1973AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        |          | 2     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0       | .0       |          | 3     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .0       |          | 11    | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .2       | *        | .0       | 23    | .0       | .6        |
| 6                  | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .1       | .1       | .0       | 18    | .0       | .5        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .4       | .4       | .2       | .0       | .0       | 38    | .0       | 1.0       |
| 4                  | .0       | .0       | .0       | .0       | .1       | .6       | .8       | .4       | .0       | .0       | 75    | .0       | 2.0       |
| 3                  | .0       | .0       | .0       | .0       | .1       | .8       | 1.0      | .2       | .0       | .0       | 76    | .0       | 2.1       |
| 2                  | .0       | .0       | .0       | .0       | .8       | 1.9      | 1.9      | .2       | .0       | .0       | 176   | .0       | 4.8       |
| 1                  | .0       | .0       | .0       | .0       | .7       | 3.8      | 2.7      | .1       | .0       | .0       | 269   | .1       | 7.2       |
| 0                  | .0       | .0       | .0       | *        | 1.4      | 8.7      | 2.8      | .1       | .0       | .0       | 479   | .2       | 12.8      |
| -1                 | .0       | .0       | .0       | .1       | 2.2      | 13.0     | 1.6      | .0       | .0       | .0       | 623   | .1       | 16.7      |
| -2                 | .0       | .0       | .0       | .2       | 4.6      | 13.0     | .8       | .0       | .0       | .0       | 687   | *        | 18.6      |
| -3                 | .0       | .0       | .0       | .2       | 4.9      | 7.8      | .3       | .0       | .0       | .0       | 490   | *        | 13.2      |
| -4                 | .0       | .0       | .0       | .2       | 4.5      | 3.4      | .1       | .0       | .0       | .0       | 306   | .0       | 8.3       |
| -5                 | .0       | .0       | .0       | .1       | 3.4      | 1.5      | *        | .0       | .0       | .0       | 187   | .0       | 5.1       |
| -6                 | .0       | .0       | .1       | .2       | 1.4      | .7       | .1       | .0       | .0       | .0       | 90    | .0       | 2.4       |
| -7/-8              | .0       | .0       | .2       | .2       | 1.2      | .5       | .0       | .0       | .0       | .0       | 77    | *        | 2.1       |
| -9/-10             | .0       | .1       | *        | .2       | .3       | *        | .0       | .0       | .0       | .0       | 21    | *        | .5        |
| -11/-13            | .2       | .1       | .1       | .1       | .7       | .0       | .0       | .0       | .0       | .0       | 25    | *        | .6        |
| -14/-16            | .5       | *        | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 20    | .0       | .5        |
| -20/-22            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 27       |          | 14       |          | 960      | 477      |          | 8        |          |          | 3697  | 18       | 3679      |
| PCT                | .7       | .2       | .4       |          | 1.4      | 26.0     | 56.5     | 12.9     | 1.6      | .2       | 100.0 | .5       | 99.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE  |      |       |       |       |     |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     |
| <1      | .3  | 1.5  | .1    | .0    | .0    | .0  | 1.9  |     | .6  | 2.0  | .2    | .0    | .0    | .0  | 2.8  |     |
| 1-2     | .2  | 4.8  | 1.1   | .0    | .0    | .0  | 6.0  |     | .5  | 9.5  | 3.9   | .0    | .0    | .0  | 13.9 |     |
| 3-4     | .0  | 2.8  | 3.7   | .2    | .0    | .0  | 6.7  |     | .0  | 4.9  | 9.1   | .6    | .0    | .0  | 14.6 |     |
| 5-6     | .0  | .3   | 3.3   | 1.0   | .1    | .0  | 4.7  |     | .0  | .8   | 6.1   | 1.0   | *     | .0  | 8.0  |     |
| 7       | .0  | *    | 1.9   | 1.2   | *     | .0  | 3.2  |     | .0  | .4   | 2.9   | 1.3   | .1    | .0  | 4.6  |     |
| 8-9     | .0  | *    | .4    | .5    | .0    | .0  | .9   |     | .0  | .1   | .9    | 1.3   | .0    | .0  | 2.4  |     |
| 10-11   | .0  | .0   | .1    | .3    | *     | .0  | .5   |     | .0  | .0   | .3    | .7    | *     | .0  | 1.0  |     |
| 12      | .0  | .0   | .0    | .1    | .1    | .0  | .1   |     | .0  | .0   | .0    | .3    | .2    | .0  | .5   |     |
| 13-16   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |     | .0  | .0   | .1    | .1    | *     | .0  | .2   |     |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *    |     | .0  | .0   | .0    | *     | *     | .0  | *    |     |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *    |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| TOT PCT | .5  | 9.4  | 10.7  | 3.4   | .2    | .0  | 24.2 |     | 1.1 | 17.8 | 23.5  | 5.3   | .3    | .0  | 48.0 |     |

| HGT     | E   |      |       |       |       |     |      | PCT | SE  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     |
| <1      | .2  | .9   | .1    | .0    | .0    | .0  | 1.1  |     | .1  | .2   | *     | .0    | .0    | .0  | .3  |     |
| 1-2     | .2  | 3.1  | .9    | .0    | .0    | .0  | 4.1  |     | *   | .4   | .2    | .0    | .0    | .0  | .6  |     |
| 3-4     | .0  | 1.5  | 1.7   | .1    | .0    | .0  | 3.3  |     | .0  | .4   | .5    | .0    | .0    | .0  | .8  |     |
| 5-6     | .0  | .2   | .8    | .1    | .0    | .0  | 1.0  |     | .0  | *    | .2    | .0    | .0    | .0  | .2  |     |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .3   |     | .0  | .0   | *     | .0    | .0    | .0  | *   |     |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | *     | .0    | .0    | .0  | *   |     |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 12      | .0  | *    | .1    | .0    | .0    | .0  | .1   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | *    |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| TOT PCT | .4  | 5.7  | 3.7   | .3    | .0    | .0  | 10.0 |     | .2  | 1.0  | 1.0   | .0    | .0    | .0  | 2.2 |     |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

28.0N 15.1W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .3  | .2   | *     | .0    | .0    | .0  |  | .6  | .1  | .2   | .0    | .0    | .0    | .0  |  | .3  |
| 1-2     | .0  | .4   | .2    | .0    | .0    | .0  |  | .6  | .1  | .6   | .2    | .0    | .0    | .0  |  | .8  |
| 3-4     | .0  | .2   | .1    | .0    | .0    | .0  |  | .3  | .0  | .2   | .1    | .0    | .0    | .0  |  | .3  |
| 5-6     | .0  | *    | .0    | *     | .0    | .0  |  | .1  | .0  | .1   | *     | *     | .0    | .0  |  | .2  |
| 7       | .0  | .0   | .0    | *     | .0    | .0  |  | *   | .0  | .0   | *     | *     | .0    | .0  |  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .3  | .9   | .3    | .1    | .0    | .0  |  | 1.6 | .2  | 1.1  | .3    | .1    | .0    | .0  |  | 1.7 |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | *   | .5   | *     | .0    | .0    | .0  |  | .6  | .0  | .6   | .1    | .0    | .0    | .0  |  | .7  |           |
| 1-2     | .0  | .5   | .3    | .0    | .0    | .0  |  | .8  | .1  | 1.0  | .3    | .0    | .0    | .0  |  | 1.5 |           |
| 3-4     | .0  | .1   | .3    | .0    | .0    | .0  |  | .4  | .0  | .4   | *     | *     | .0    | .0  |  | 1.0 |           |
| 5-6     | .0  | .0   | .1    | *     | .0    | .0  |  | .2  | .0  | .2   | .4    | .1    | *     | .0  |  | .7  |           |
| 7       | .0  | .0   | .2    | *     | .0    | .0  |  | .3  | .0  | .0   | .2    | .2    | .0    | .0  |  | .4  |           |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  |  | .2  | .0  | *    | *     | .1    | .0    | .0  |  | .1  |           |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  |  | *   | .0  | .0   | *     | *     | .0    | .0  |  | .1  |           |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  |  | .2  | .0  | .0   | .0    | .1    | .0    | .0  |  | .1  |           |
| 13-16   | .0  | .0   | .0    | .0    | .1    | .0  |  | .1  | .0  | .0   | .0    | .1    | .1    | .0  |  | .2  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | *     | .0    | .0  |  | *   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | *   | 1.1  | 1.1   | .4    | .1    | .0  |  | 2.8 | .1  | 2.3  | 1.7   | .7    | .1    | .0  |  | 4.8 | 95.3      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.2 | 6.4  | .5    | .0    | .0    | .0  | 14.1  |         |
| 1-2     | 1.1 | 20.1 | 7.0   | .0    | .0    | .0  | 28.2  |         |
| 3-4     | *   | 10.4 | 15.9  | .8    | .0    | .0  | 27.2  |         |
| 5-6     | .0  | 1.7  | 10.8  | 2.2   | .1    | .0  | 14.9  |         |
| 7       | .0  | .4   | 5.3   | 2.8   | .1    | .0  | 8.6   |         |
| 8-9     | .0  | .1   | 1.5   | 2.0   | .0    | .0  | 3.6   |         |
| 10-11   | .0  | .0   | .4    | 1.1   | *     | .0  | 1.6   |         |
| 12      | .0  | *    | .1    | .6    | .2    | .0  | 1.0   |         |
| 13-16   | .0  | .0   | .1    | .4    | .2    | .0  | .7    |         |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.4 | 39.2 | 41.6  | 10.1  | .7    | .0  | 100.0 | 2187    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | 1.5 | 9.2  | 12.8 | 6.6  | 3.0  | 1.4 | .3    | .2  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 913         | 4 |
| 6-7             | *   | .8   | 5.0  | 6.5  | 3.9  | 1.9 | 1.1   | .3  | .3    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 526         | 6 |
| 8-9             | .0  | .3   | 2.0  | 3.2  | 2.0  | 1.6 | 1.7   | .9  | .6    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 351         | 7 |
| 10-11           | .0  | .5   | .7   | .8   | 1.0  | 1.2 | .7    | .2  | .2    | .1    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 143         | 7 |
| 12-13           | .0  | .0   | 1.0  | .4   | .5   | .2  | .1    | .2  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 66          | 6 |
| >13             | .0  | .0   | .0   | .3   | .3   | .2  | .1    | .1  | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 26          | 9 |
| INDET           | 4.3 | 4.7  | 5.6  | 2.4  | 2.8  | 1.0 | .5    | .3  | .2    | *     | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 573         | 4 |
| TOTAL           | 154 | 406  | 706  | 526  | 379  | 195 | 115   | 55  | 40    | 16    | 4     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 2598        | 5 |
| PCT             | 5.9 | 15.6 | 27.2 | 20.2 | 14.6 | 7.5 | 4.4   | 2.1 | 1.5   | .6    | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

ANNUAL

TABLE 1

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| N                  | .4   | 1.0       | .4   | .0        | .0   | .0              | *    | 1.8             | 1.0            | .3                      | 1.7         | *                   | 1.8        | .1              | 93.3       |
| NE                 | .3   | .5        | .3   | .0        | .0   | .0              | *    | 1.0             | .5             | .3                      | 1.5         | *                   | 1.9        | .2              | 94.7       |
| E                  | 1.0  | .8        | .2   | .0        | .0   | .0              | .0   | 1.9             | .5             | .6                      | 2.4         | .1                  | 2.0        | .1              | 92.3       |
| SE                 | 1.3  | 1.4       | .4   | .0        | .0   | .0              | *    | 3.1             | .9             | 2.4                     | 3.5         | .0                  | 1.3        | .4              | 88.5       |
| S                  | 1.1  | 1.2       | .8   | .0        | .0   | .0              | .0   | 3.0             | 2.1            | .7                      | 2.3         | .0                  | 1.3        | .2              | 90.4       |
| SW                 | 1.5  | 2.4       | .6   | .0        | .0   | .0              | *    | 4.5             | 1.1            | 1.0                     | 2.8         | .0                  | 1.2        | .0              | 89.6       |
| W                  | .8   | 2.2       | .8   | .0        | .0   | .0              | *    | 3.9             | 1.9            | .7                      | .9          | .0                  | .9         | *               | 91.8       |
| NW                 | 1.0  | 1.6       | .7   | .0        | .0   | .0              | *    | 3.2             | 1.9            | .5                      | 1.8         | *                   | 1.8        | .1              | 90.7       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .4   | .1        | *    | .0        | .0   | .0              | .0   | .5              | .4             | .1                      | 3.9         | .1                  | 1.5        | .1              | 93.5       |
| TOT PCT            | .6   | .9        | .4   | .0        | .0   | .0              | *    | 1.8             | .9             | .4                      | 1.8         | *                   | 1.9        | .2              | 93.2       |
| TOT OBS: 45233     |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)  | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                       |              |                  |
|----------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-----------------------|--------------|------------------|
|                | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003          | .6                 | .7           | .3   | .0           | .0   | .0                    | *    | 1.5                     | .9                | .8           | 1.4               | *                         | 1.2           | .1                    |              | 94.1             |
| 06009          | .5                 | 1.1          | .6   | .0           | .0   | .0                    | *    | 2.2                     | .9                | .8           | 1.9               | *                         | 1.4           | .1                    |              | 92.6             |
| 12015          | .5                 | .7           | .3   | .0           | .0   | .0                    | *    | 1.5                     | .9                | *            | 1.5               | *                         | 2.2           | .2                    |              | 93.6             |
| 18021          | .6                 | .9           | .3   | .0           | .0   | .0                    | *    | 1.8                     | .6                | .3           | 2.2               | *                         | 2.5           | .2                    |              | 92.5             |
| TOT PCT        | .5                 | .9           | .4   | .0           | .0   | .0                    | *    | 1.8                     | .9                | .5           | 1.8               | *                         | 1.8           | .2                    |              | 93.2             |
| TOT OBS: 46777 |                    |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                       |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 11.0 | 12.8  | 2.5   | .1    | .0  |       | 27.6      | 12.3     |          | 27.8       | 33.6  | 28.1  | 24.8  | 27.2  | 33.3  | 29.3  | 25.1  |
| NE       | 1.2                | 14.9 | 21.4  | 5.0   | .3    | .0  |       | 42.7      | 13.5     |          | 43.6       | 39.8  | 42.5  | 44.8  | 41.6  | 39.3  | 41.4  | 45.0  |
| E        | .6                 | 3.7  | 2.4   | .3    | *     | .0  |       | 7.0       | 10.7     |          | 6.8        | 5.4   | 6.6   | 8.5   | 7.4   | 5.9   | 6.3   | 7.7   |
| SE       | .3                 | 1.4  | .6    | .1    | *     | .0  |       | 2.5       | 8.1      |          | 1.9        | 1.6   | 2.4   | 2.7   | 3.0   | 2.9   | 2.6   | 2.6   |
| S        | .4                 | 1.3  | .7    | .2    | *     | .0  |       | 2.6       | 9.2      |          | 2.4        | 2.5   | 2.3   | 2.3   | 3.3   | 3.5   | 2.8   | 2.1   |
| SW       | .4                 | 2.0  | 1.2   | .2    | *     | .0  |       | 3.9       | 9.5      |          | 3.8        | 3.7   | 3.6   | 3.5   | 4.1   | 3.5   | 4.2   | 3.8   |
| W        | .5                 | 2.3  | 1.2   | .2    | *     | .0  |       | 4.3       | 9.2      |          | 4.0        | 4.3   | 4.3   | 4.2   | 4.2   | 4.6   | 4.5   | 4.6   |
| NW       | .6                 | 3.7  | 2.0   | .4    | *     | .0  |       | 6.6       | 10.0     |          | 6.3        | 6.5   | 6.8   | 6.9   | 6.4   | 5.8   | 6.8   | 6.9   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.8                |      |       |       |       |     |       | 2.8       | .0       |          | 3.4        | 2.4   | 3.4   | 2.2   | 2.7   | 1.1   | 2.2   | 2.4   |
| TOT OBS  |                    |      |       |       |       |     | 91709 |           | 12.0     |          | 18908      | 1058  | 18351 | 8131  | 17264 | 1152  | 17656 | 9389  |
| TOT PCT  | 7.9                | 40.3 | 42.4  | 8.9   | .6    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 06    | 12    | 18    |
| N        | 5.0                | 15.2 | 6.6   | .7    | *   |           | 27.6     | 12.3     | 28.1       | 27.1  | 27.6  | 27.8  |
| NE       | 5.8                | 23.1 | 12.3  | 1.5   | *   |           | 42.7     | 13.5     | 43.4       | 43.2  | 41.5  | 42.7  |
| E        | 2.1                | 3.8  | 1.0   | .1    | *   |           | 7.0      | 10.7     | 6.7        | 7.2   | 7.3   | 6.8   |
| SE       | 1.1                | 1.1  | .3    | *     | *   |           | 2.5      | 8.1      | 1.9        | 2.5   | 3.0   | 2.6   |
| S        | 1.1                | 1.1  | .3    | .1    | *   |           | 2.6      | 9.2      | 2.4        | 2.3   | 3.4   | 2.5   |
| SW       | 1.4                | 1.8  | .6    | .1    | *   |           | 3.9      | 9.5      | 3.8        | 3.6   | 4.1   | 4.1   |
| W        | 1.6                | 2.0  | .6    | .1    | *   |           | 4.3      | 9.2      | 4.0        | 4.3   | 4.2   | 4.5   |
| NW       | 2.2                | 3.4  | .9    | .1    | *   |           | 6.6      | 10.0     | 6.3        | 6.8   | 6.3   | 6.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 2.8                |      |       |       |     |           | 2.8      | .0       | 3.3        | 3.0   | 2.6   | 2.3   |
| TOT OBS  |                    |      |       |       |     | 91709     |          | 12.0     | 19566      | 26682 | 18416 | 27045 |
| TOT PCT  | 23.1               | 51.6 | 22.6  | 2.6   | .1  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 3.3  | 4.9 | 40.7 | 41.7               | 8.8   | .5    | .0  | 11.9 | 100.0    | 19566     |
| 06009 | 3.0  | 5.1 | 41.6 | 41.2               | 8.6   | .5    | .0  | 11.7 | 100.0    | 26682     |
| 12015 | 2.6  | 5.2 | 38.2 | 44.0               | 9.4   | .6    | .0  | 12.2 | 100.0    | 18416     |
| 18021 | 2.3  | 5.2 | 40.1 | 42.8               | 9.0   | .6    | .0  | 12.1 | 100.0    | 27045     |
| TOT   |      |     |      |                    |       |       |     | 12.0 |          | 91709     |
| PCT   | 2.8  | 5.1 | 40.3 | 42.4               | 8.9   | .6    | .0  | 12.0 | 100.0    |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
| N        | 12.4 | 7.0  | 9.2  | 4.2           |              | 3.7                    |
| NE       | 16.2 | 6.0  | 10.4 | 4.1           |              | 3.5                    |
| E        | 2.5  | .8   | 1.2  | .5            |              | 3.4                    |
| SE       | 1.0  | .4   | .6   | .3            |              | 3.4                    |
| S        | 1.1  | .7   | 1.0  | .4            |              | 3.6                    |
| SW       | 1.5  | .9   | 1.3  | .4            |              | 3.5                    |
| W        | 1.8  | 1.1  | 1.1  | .3            |              | 3.4                    |
| NW       | 2.6  | 1.7  | 1.8  | .6            |              | 3.5                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | 2.0  | .5   | .6   | .2            |              | 2.3                    |
| TOT OBS  |      |      |      |               | 35825        | 3.6                    |
| TOT PCT  | 41.0 | 20.8 | 27.1 | 11.1          | 100.0        |                        |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3999 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .1  | .2  | .2  | 1.3 | 4.1  | 3.4  | 1.2  | .3   | .2   | .3    | 21.7    |       |
| .2  | .2  | 1.3 | 4.0 | 3.5  | 1.5  | .4   | .2   | .4   | .4    | 27.2    |       |
| .1  | .1  | .3  | .3  | .2   | .1   | .1   | .1   | .1   | .1    | 3.8     |       |
| .0  | .1  | .1  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | 1.7     |       |
| .1  | .3  | .2  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | 2.2     |       |
| .2  | .4  | .3  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | 3.0     |       |
| .1  | .4  | .3  | .1  | .1   | .1   | .1   | .1   | .1   | .1    | 3.3     |       |
| .0  | .2  | .6  | .5  | .2   | .1   | .1   | .1   | .1   | .1    | 4.9     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .2  | .2  | .1   | .1   | .1   | .1   | .1   | .1    | 2.7     |       |
| .2  | .1  | .5  | 3.4 | 10.4 | 8.9  | 3.6  | 1.0  | .5   | 1.0   | 70.4    | 35825 |
|     |     |     |     |      |      |      |      |      |       |         | 100.0 |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.2       | 1.5  | 1.6  | 1.6  | 1.6  | 1.6  | 1.6   | 1.6  |
| >5000             | 2.0       | 2.5  | 2.6  | 2.6  | 2.6  | 2.6  | 2.6   | 2.6  |
| >3500             | 4.9       | 6.0  | 6.2  | 6.2  | 6.2  | 6.2  | 6.2   | 6.2  |
| >2000             | 11.8      | 14.6 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0  | 15.0 |
| >1000             | 20.2      | 24.6 | 25.3 | 25.3 | 25.3 | 25.3 | 25.3  | 25.3 |
| >600              | 22.8      | 27.9 | 28.6 | 28.7 | 28.7 | 28.7 | 28.7  | 28.7 |
| >300              | 23.0      | 28.3 | 29.1 | 29.2 | 29.2 | 29.2 | 29.2  | 29.2 |
| >150              | 23.1      | 28.4 | 29.2 | 29.2 | 29.3 | 29.3 | 29.3  | 29.3 |
| >0                | 23.1      | 28.4 | 29.3 | 29.4 | 29.4 | 29.4 | 29.4  | 29.4 |

TOTAL NUMBER OF OBS: 36615

PCT FREQ NH <5/8: 70.6

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBS CD | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|-----|--------|--------------|
| 21.4 | 13.8 | 14.4 | 11.9 | 8.4 | 6.0 | 7.3 | 7.5 | 9.2 | .1     | 38923        |



PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VISBY<br>(NM) |        | N     | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|---------------|--------|-------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2          | PCP    | .0    | *    | *   | .0  | .0  | .0  | *   | *   | .0  | .0   | *     |              |
|               | NO PCP | *     | *    | *   | .0  | *   | *   | *   | *   | .0  | *    | .1    |              |
|               | TOT %  | *     | *    | *   | .0  | *   | *   | *   | *   | .0  | *    | .1    |              |
| 1/2<1         | PCP    | *     | *    | *   | *   | *   | *   | *   | .0  | .0  | .0   | *     |              |
|               | NO PCP | .2    | .3   | *   | *   | *   | *   | *   | *   | .0  | .0   | .7    |              |
|               | TOT %  | .2    | .3   | .1  | *   | *   | *   | *   | *   | .0  | .0   | .7    |              |
| 1<2           | PCP    | *     | *    | .0  | .0  | *   | *   | *   | *   | .0  | .0   | *     |              |
|               | NO PCP | .1    | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .4    |              |
|               | TOT %  | .1    | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .5    |              |
| 2<5           | PCP    | *     | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|               | NO PCP | .6    | .5   | .1  | .1  | .1  | *   | .1  | .1  | .0  | .1   | 1.6   |              |
|               | TOT %  | .7    | .5   | .1  | .1  | .1  | .1  | .1  | .1  | .0  | .1   | 1.7   |              |
| 5<10          | PCP    | .2    | .2   | .1  | *   | .1  | .1  | .1  | .1  | .0  | *    | .9    |              |
|               | NO PCP | 6.8   | 8.4  | 1.1 | .6  | .6  | .8  | .8  | 1.4 | .0  | .5   | 20.9  |              |
|               | TOT %  | 7.0   | 8.6  | 1.2 | .6  | .7  | .9  | .8  | 1.5 | .0  | .5   | 21.8  |              |
| 10+           | PCP    | .2    | .2   | *   | *   | *   | .1  | .1  | .1  | .0  | *    | .7    |              |
|               | NO PCP | 23.7  | 29.1 | 3.9 | 1.6 | 2.3 | 3.1 | 3.4 | 5.0 | .0  | 2.4  | 74.5  |              |
|               | TOT %  | 23.9  | 29.3 | 3.9 | 1.7 | 2.3 | 3.1 | 3.5 | 5.1 | .0  | 2.4  | 75.2  |              |
| TOT OBS       |        | 45120 |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT       |        | 32.0  | 38.9 | 5.3 | 2.4 | 3.1 | 4.1 | 4.4 | 6.8 | .0  | 3.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VISBY<br>(NM) | SPD<br>KTS | N     | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|---------------|------------|-------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2          | 0-3        | .0    | *    | *   | .0  | .0  | *   | .0  | .0  | .0  | *    | *     |              |
|               | 4-10       | *     | *    | *   | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|               | 11-21      | *     | *    | *   | .0  | .0  | *   | .0  | .0  | .0  | *    | *     |              |
|               | 22+        | *     | *    | .0  | .0  | .0  | .0  | .0  | *   | .0  | *    | *     |              |
|               | TOT %      | *     | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
| 1/2<1         | 0-3        | *     | *    | *   | .0  | *   | .0  | *   | *   | .0  | *    | *     |              |
|               | 4-10       | *     | *    | *   | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|               | 11-21      | .1    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
|               | 22+        | *     | *    | .0  | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|               | TOT %      | .2    | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .5    |              |
| 1<2           | 0-3        | *     | *    | *   | .0  | .0  | *   | .0  | .0  | .0  | *    | *     |              |
|               | 4-10       | *     | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|               | 11-21      | .1    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
|               | 22+        | *     | *    | *   | *   | *   | *   | .0  | *   | .0  | *    | .1    |              |
|               | TOT %      | .1    | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .4    |              |
| 2<5           | 0-3        | *     | *    | *   | *   | *   | *   | *   | *   | .0  | .1   | .2    |              |
|               | 4-10       | .2    | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .5    |              |
|               | 11-21      | .3    | .3   | *   | *   | *   | *   | *   | *   | .0  | *    | .9    |              |
|               | 22+        | .1    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
|               | TOT %      | .7    | .6   | .1  | .1  | .1  | .1  | .1  | .1  | .0  | .1   | 1.9   |              |
| 5<10          | 0-3        | .2    | .2   | .1  | .1  | .1  | .1  | .1  | .1  | .0  | .4   | 1.3   |              |
|               | 4-10       | 2.0   | 2.3  | .5  | .2  | .3  | .4  | .4  | .6  | .0  | *    | 6.7   |              |
|               | 11-21      | 3.0   | 4.1  | .4  | .2  | .2  | .3  | .2  | .5  | .0  | *    | 8.9   |              |
|               | 22+        | .8    | 1.4  | .1  | *   | .1  | .1  | .1  | .1  | .0  | *    | 2.6   |              |
|               | TOT %      | 6.1   | 8.1  | 1.1 | .5  | .6  | .7  | .7  | 1.3 | .0  | .4   | 19.5  |              |
| 10+           | 0-3        | .9    | .8   | .2  | .2  | .3  | .3  | .4  | .4  | .0  | 2.3  | 6.0   |              |
|               | 4-10       | 9.0   | 11.2 | 2.7 | 1.0 | 1.1 | 1.6 | 1.9 | 3.0 | .0  | *    | 31.6  |              |
|               | 11-21      | 11.1  | 16.6 | 1.5 | .5  | .6  | .9  | 1.0 | 1.5 | .0  | *    | 33.8  |              |
|               | 22+        | 2.0   | 3.4  | .1  | *   | .1  | .2  | .2  | .3  | .0  | *    | 6.3   |              |
|               | TOT %      | 22.9  | 32.0 | 4.7 | 1.7 | 2.1 | 3.0 | 3.4 | 5.2 | .0  | 2.3  | 77.6  |              |
| TOT OBS       |            | 64533 |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT       |            | 30.0  | 41.1 | 6.0 | 2.3 | 2.8 | 3.9 | 4.3 | 6.6 | .0  | 2.9  | 100.0 |              |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS   |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|----------------|
| 00003         | .3         | *          | .4         | 2.9        | 8.9          | 7.9          | 2.9          | .8           | .5           | .9    | 25.4  | 74.6               | 8936           |
| 06009         | .3         | .1         | .6         | 4.5        | 13.0         | 10.2         | 4.1          | 1.2          | .6           | 1.0   | 35.6  | 64.4               | 9127           |
| 12015         | .1         | .1         | .5         | 3.0        | 9.8          | 8.7          | 3.9          | 1.1          | .5           | 1.1   | 28.6  | 71.4               | 10190          |
| 18021         | *          | *          | .4         | 2.7        | 8.3          | 7.7          | 3.0          | .9           | .5           | 1.1   | 24.6  | 75.4               | 9814           |
| TOT<br>PCT    | .2         | .1         | .5         | 3.3        | 10.0         | 8.6          | 3.5          | 1.0          | .5           | 1.0   | 28.5  | 71.5               | 38067<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS   |
|---------------|------|-------|-----|-----|------|------|----------------|
| 00003         | .1   | .4    | .2  | 2.0 | 17.8 | 79.4 | 14715          |
| 06009         | .1   | .7    | .5  | 1.8 | 22.4 | 74.5 | 18106          |
| 12015         | .1   | .4    | .4  | 1.8 | 17.4 | 79.9 | 15028          |
| 18021         | *    | .7    | .5  | 1.9 | 20.5 | 76.4 | 18240          |
| TOT<br>PCT    | .1   | .5    | .4  | 1.9 | 19.7 | 77.3 | 66089<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS   |
|---------------|---------------|------------|-------------|-----------------|-------------------|----------------|
| 00003         | .3            | .8         | 5.5         | 22.0            | 72.4              | 8465           |
| 06009         | .3            | 1.2        | 7.6         | 30.3            | 62.1              | 8766           |
| 12015         | .2            | .7         | 5.4         | 24.8            | 69.8              | 9872           |
| 18021         | *             | .5         | 5.1         | 21.2            | 73.8              | 9512           |
| TOT<br>PCT    | .2            | .8         | 5.9         | 24.6            | 69.5              | 36615<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89        | .0   | *     | *     | .0    | *     | *     | .0    | .0     | *            | *           |
| 80/84        | .0   | .0    | *     | .1    | .1    | *     | *     | .0     | .3           | *           |
| 75/79        | .0   | *     | .2    | .9    | 2.4   | 1.2   | .4    | .0     | 5.1          | *           |
| 70/74        | .0   | .1    | .5    | 3.8   | 11.5  | 13.0  | 5.0   | .0     | 33.9         | *           |
| 65/69        | .0   | .1    | 1.7   | 7.3   | 14.5  | 12.9  | 4.8   | .0     | 41.3         | *           |
| 60/64        | .0   | .0    | 1.1   | 4.7   | 6.6   | 4.5   | 2.0   | .0     | 18.9         | *           |
| 55/59        | .0   | .0    | .0    | .1    | .1    | .1    | .1    | .0     | .4           | *           |
| 50/54        | .0   | .0    | .0    | .0    | *     | *     | .0    | .0     | *            | *           |
| TOTAL<br>PCT | .0   | *     | .3    | 3.5   | 17.0  | 35.3  | 31.7  | 12.2   | 34207        | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 85/89 | *    | *    | .0  | *   | .0  | *   | *   | *   | .0  | .0   |
| 80/84 | .2   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    |
| 75/79 | 2.0  | 2.1  | .2  | .1  | .1  | .1  | .3  | .0  | .1  | *    |
| 70/74 | 12.0 | 14.2 | 1.4 | .5  | .9  | 1.0 | 1.2 | 1.9 | .0  | .7   |
| 65/69 | 12.1 | 15.5 | 2.5 | 1.3 | 1.5 | 2.2 | 2.3 | 2.8 | .0  | .9   |
| 60/64 | 5.8  | 7.9  | 1.1 | .3  | .5  | .5  | .8  | 1.6 | .0  | .5   |
| 55/59 | .1   | .1   | *   | *   | *   | *   | *   | .1  | .0  | *    |
| 50/54 | *    | .0   | .0  | .0  | .0  | .0  | *   | .0  | .0  | .0   |
| TOTAL | 32.2 | 39.9 | 5.3 | 2.3 | 3.0 | 3.9 | 4.5 | 6.7 | .0  | 2.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 87  | 73  | 71  | 67  | 64 | 61 | 46  | 67.1 | 19825        |
| 06009         | 85  | 73  | 71  | 67  | 63 | 61 | 46  | 67.0 | 26791        |
| 12015         | 87  | 78  | 75  | 70  | 66 | 63 | 46  | 70.0 | 18206        |
| 18021         | 87  | 77  | 74  | 69  | 65 | 63 | 46  | 69.0 | 26792        |
| TOT           | 87  | 77  | 73  | 68  | 64 | 62 | 46  | 68.2 | 91614        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.0   | 12.3  | 32.1  | 36.7  | 16.9   | 80   | 8456         |
| 06009         | .0   | 2.8   | 13.7  | 32.0  | 36.1  | 15.4   | 79   | 8876         |
| 12015         | .0   | 6.9   | 23.7  | 38.7  | 23.7  | 7.1    | 74   | 8857         |
| 18021         | .0   | 3.6   | 17.7  | 38.0  | 30.7  | 10.0   | 77   | 9069         |
| TOT           | 0    | 1351  | 5972  | 12419 | 11194 | 4322   | 78   | 35258        |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 14    | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 31    | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .1       | .0       | 106   | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .3       | .4       | .4       | .1       | .0       | 210   | .0       | .5        |
| 7/8                | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .3       | .2       | .0       | .0       | 350   | .0       | 1.3       |
| 6                  | .0       | .0       | .0       | .0       | .0       | .1       | .2       | .3       | .2       | .0       | .0       | 360   | .0       | .8        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .3       | .7       | .9       | .4       | .0       | .0       | 998   | .1       | 2.3       |
| 4                  | .0       | .0       | .0       | .0       | .1       | .7       | 1.2      | 1.1      | .3       | .0       | .0       | 1404  | .1       | 3.2       |
| 3                  | .0       | .0       | .0       | .0       | .1       | 1.0      | 1.7      | 1.6      | .2       | .0       | .0       | 1944  | .1       | 4.5       |
| 2                  | .0       | .0       | .0       | .0       | .3       | 2.4      | 3.2      | 2.2      | .2       | .0       | .0       | 3507  | .2       | 8.2       |
| 1                  | .0       | .0       | .0       | .0       | .8       | 4.2      | 5.1      | 2.6      | .1       | .0       | .0       | 5316  | .2       | 12.5      |
| 0                  | .0       | .0       | .0       | .0       | 2.2      | 7.3      | 6.8      | 2.4      | .0       | .0       | .0       | 7921  | .4       | 18.5      |
| -1                 | .0       | .0       | .0       | .1       | 3.5      | 7.0      | 5.6      | 1.2      | .0       | .0       | .0       | 7346  | .3       | 17.1      |
| -2                 | .0       | .0       | .0       | .1       | 4.1      | 4.8      | 2.9      | .5       | .0       | .0       | .0       | 5304  | .2       | 12.3      |
| -3                 | .0       | .0       | .0       | .2       | 2.8      | 2.5      | 1.4      | .2       | .0       | .0       | .0       | 3004  | .1       | 7.0       |
| -4                 | .0       | .0       | .0       | .3       | 2.0      | 1.3      | .7       | .1       | .0       | .0       | .0       | 1878  | .0       | 4.4       |
| -5                 | .0       | .0       | .0       | .3       | 1.2      | .7       | .4       | .0       | .0       | .0       | .0       | 1103  | .0       | 2.6       |
| -6                 | .0       | .0       | .0       | .2       | .4       | .2       | .1       | .0       | .0       | .0       | .0       | 459   | .0       | 1.1       |
| -7/-8              | .0       | .0       | .1       | .2       | .3       | .2       | .1       | .0       | .0       | .0       | .0       | 377   | .0       | .9        |
| -9/-10             | .0       | .0       | .1       | .1       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 157   | .0       | .4        |
| -11/-13            | .0       | .1       | .1       | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 115   | .0       | .3        |
| -14/-16            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 43    | .0       | .1        |
| -17/-19            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 7     | .0       | .0        |
| -20/-22            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 6     | .0       | .0        |
| TOTAL              |          |          |          |          |          |          |          |          |          |          |          | 42162 |          |           |
| PCT                | .1       | .1       | .3       | 1.5      | 18.4     | 32.8     | 30.4     | 13.9     | 2.1      | .3       | *        | 100.0 | 1.9      | 98.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .5  | 1.6  | .1    | .0    | .0    | .0  | 2.3  | .4  | 1.3  | .1    | .0    | .0    | .0  | 1.8  |
| 1-2     | .3  | 6.1  | 2.8   | .0    | .0    | .0  | 9.3  | .2  | 6.1  | 3.2   | .0    | .0    | .0  | 9.5  |
| 3-4     | .0  | 2.8  | 6.7   | .4    | .0    | .0  | 9.9  | .0  | 3.1  | 7.9   | .6    | .0    | .0  | 11.6 |
| 5-6     | .0  | .7   | 4.9   | .9    | .0    | .0  | 6.5  | .0  | .7   | 6.1   | 1.2   | .0    | .0  | 8.0  |
| 7       | .0  | .1   | 2.0   | .9    | .0    | .0  | 3.0  | .0  | .1   | 2.7   | 1.3   | .0    | .0  | 4.2  |
| 8-9     | .0  | .0   | .6    | .5    | .0    | .0  | 1.2  | .0  | .0   | .9    | .8    | .0    | .0  | 1.8  |
| 10-11   | .0  | .0   | .2    | .4    | .0    | .0  | .6   | .0  | .0   | .2    | .5    | .0    | .0  | .8   |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .8  | 11.3 | 17.5  | 3.4   | .2    | .0  | 33.3 | .7  | 11.3 | 21.3  | 4.7   | .2    | .0  | 38.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .5   | .0    | .0    | .0    | .0  | 1.7 | .1  | .3   | .0    | .0    | .0    | .0  | .4  |
| 1-2     | .1  | 1.3  | .5    | .0    | .0    | .0  | 1.9 | .0  | .6   | .2    | .0    | .0    | .0  | .8  |
| 3-4     | .0  | .6   | .7    | .0    | .0    | .0  | 1.3 | .0  | .2   | .3    | .0    | .0    | .0  | .5  |
| 5-6     | .0  | .1   | .4    | .1    | .0    | .0  | .6  | .0  | .0   | .2    | .0    | .0    | .0  | .3  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .2  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 2.5  | 1.7   | .2    | .0    | .0  | 4.7 | .1  | 1.1  | .8    | .1    | .0    | .0  | 2.2 |



PERIOD: (OVER-ALL) 1963-1973

ANNUAL  
TABLE 18 (CONT)AREA 0004 CANARY ISLANDS  
28.0N 15.1W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     |  | SW  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|--|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .2  | .3   | *     | .0    | .0    | .0  | .5  |  | .2  | .4   | *     | .0    | .0    | .0  | .6  |  |
| 1-2     | .1  | .7   | .2    | .0    | .0    | .0  | 1.1 |  | .1  | 1.0  | .3    | .0    | .0    | .0  | 1.4 |  |
| 3-4     | *   | .3   | .4    | *     | .0    | .0  | .8  |  | *   | .5   | .6    | *     | .0    | .0  | 1.1 |  |
| 5-6     | *   | *    | .2    | *     | *     | .0  | .3  |  | *   | .1   | .3    | .1    | *     | .0  | .5  |  |
| 7       | .0  | *    | .1    | .1    | *     | .0  | .1  |  | .0  | *    | .1    | .1    | *     | .0  | .2  |  |
| 8-9     | .0  | *    | *     | *     | *     | .0  | .1  |  | .0  | *    | .1    | *     | *     | .0  | .1  |  |
| 10-11   | .0  | .0   | *     | *     | *     | .0  | *   |  | .0  | .0   | *     | *     | *     | .0  | *   |  |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   |  | .0  | .0   | *     | *     | *     | .0  | *   |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | *     | *     | .0    | .0  | *   |  |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *   |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .3  | 1.4  | 1.0   | .2    | *     | .0  | 2.9 |  | .3  | 2.0  | 1.4   | .2    | *     | .0  | 4.0 |  |

| HGT     | W   |      |       |       |       |     |     |  | NW  |      |       |       |       |     |     |      | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .2  | .5   | *     | .0    | .0    | .0  | .7  |  | .2  | .7   | *     | .0    | .0    | .0  | 1.0 |      |           |
| 1-2     | .1  | 1.3  | .3    | .0    | .0    | .0  | 1.7 |  | .2  | 2.0  | .5    | .0    | .0    | .0  | 2.6 |      |           |
| 3-4     | *   | .4   | .5    | *     | .0    | .0  | 1.0 |  | *   | .7   | .8    | .1    | .0    | .0  | 1.6 |      |           |
| 5-6     | *   | .1   | .3    | .1    | *     | .0  | .4  |  | .0  | .1   | .6    | .1    | *     | .0  | .8  |      |           |
| 7       | .0  | *    | .1    | *     | .0    | .0  | .2  |  | .0  | *    | .2    | .1    | .0    | .0  | .3  |      |           |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | .1  |  | .0  | *    | .1    | *     | .0    | .0  | .1  |      |           |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  | *   |  | .0  | *    | *     | *     | .0    | .0  | .1  |      |           |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   |  | .0  | *    | *     | *     | .0    | .0  | *   |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | *   |  | .0  | .0   | .0    | *     | *     | .0  | *   |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | *     | *     | .0  | *   |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .3  | 2.3  | 1.3   | .2    | *     | .0  | 4.1 |  | .4  | 3.6  | 2.2   | .4    | *     | .0  | 6.5 | 95.8 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.9 | 5.7  | .4    | .0    | .0    | .0  | 13.0  |         |
| 1-2     | 1.3 | 19.0 | 7.9   | .0    | .0    | .0  | 28.2  |         |
| 3-4     | .1  | 8.5  | 17.6  | 1.2   | .0    | .0  | 27.5  |         |
| 5-6     | *   | 1.7  | 12.9  | 2.5   | .1    | .0  | 17.2  |         |
| 7       | *   | .3   | 5.3   | 2.4   | .1    | .0  | 8.1   |         |
| 8-9     | .0  | .1   | 1.7   | 1.6   | *     | .0  | 3.4   |         |
| 10-11   | .0  | *    | .5    | 1.0   | .1    | .0  | 1.6   |         |
| 12      | .0  | *    | .1    | .3    | .1    | .0  | .5    |         |
| 13-16   | .0  | .0   | .1    | .3    | .1    | .0  | .5    |         |
| 17-19   | .0  | .0   | *     | *     | *     | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | *     | *     | .0  | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.3 | 35.3 | 46.6  | 9.3   | .5    | .0  | 100.0 | 24642   |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.7 | 9.2  | 11.4 | 6.8  | 3.3  | 1.1 | .4    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10046 | 4        |
| 6-7          | *   | 1.1  | 5.2  | 7.2  | 4.4  | 2.2 | 1.1   | .4  | .4    | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0  | 6526  | 6        |
| 8-9          | *   | .4   | 1.8  | 2.9  | 2.8  | 1.9 | 1.1   | .4  | .3    | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3512  | 7        |
| 10-11        | .0  | .6   | .7   | .9   | 1.0  | .8  | .5    | .2  | .2    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1465  | 7        |
| 12-13        | .0  | .0   | .9   | .6   | .4   | .3  | .3    | .1  | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 799   | 6        |
| 13-14        | .0  | *    | .0   | .3   | .2   | .1  | .1    | .1  | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 279   | 8        |
| INDET        | 4.3 | 4.6  | 5.3  | 3.7  | 2.8  | 1.2 | .8    | .3  | .2    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6859  | 4        |
| TOTAL        |     |      |      |      |      |     |       |     |       |       |       |       |       |       |       |       |       |       |     | 29486 | 5        |
| PCT          | 6.0 | 15.9 | 25.4 | 22.5 | 14.9 | 7.7 | 4.3   | 1.7 | 1.4   | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1915-1973  
(OVER-ALL) 1854-1973

TABLE 20

AREA 0004 CANARY ISLANDS  
28.0N 15.1W

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

| SEA TMP<br>DEG F | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANN   | PCT   |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| 96+              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 95/96            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 93/94            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 91/92            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 89/90            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 87/88            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 85/86            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 83/84            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 81/82            | .0   | .0   | .0   | .0   | .0   | .0   | .1   | .1   | .1   | .1   | .1   | .1   | 26    | *     |
| 79/80            | .0   | .0   | .0   | .0   | .0   | .0   | .1   | .2   | .4   | .2   | .1   | .0   | 74    | .1    |
| 77/78            | .0   | .0   | .0   | .0   | .0   | .1   | .3   | .8   | 1.8  | 1.3  | .4   | *    | 336   | .4    |
| 75/76            | .1   | .0   | .1   | .1   | .1   | .4   | 1.2  | 3.7  | 9.3  | 8.5  | 1.7  | .1   | 1786  | 2.0   |
| 73/74            | .2   | .1   | .2   | .2   | .4   | 2.1  | 7.4  | 22.1 | 40.6 | 35.0 | 10.8 | .7   | 8537  | 9.8   |
| 71/72            | .5   | .4   | 1.1  | .6   | 1.9  | 9.9  | 25.9 | 43.9 | 35.3 | 37.4 | 30.6 | 4.7  | 13913 | 16.0  |
| 69/70            | 4.1  | 2.6  | 3.6  | 3.4  | 8.8  | 30.2 | 43.0 | 23.9 | 9.6  | 12.0 | 33.7 | 20.0 | 14278 | 16.4  |
| 67/68            | 22.6 | 15.4 | 14.5 | 16.8 | 34.5 | 39.7 | 18.4 | 4.4  | 2.2  | 3.5  | 16.6 | 42.7 | 17027 | 19.5  |
| 65/66            | 40.9 | 34.6 | 32.7 | 36.4 | 37.5 | 13.7 | 2.8  | .6   | .5   | 1.3  | 4.3  | 22.1 | 16617 | 19.1  |
| 63/64            | 25.8 | 36.9 | 38.7 | 35.7 | 15.0 | 3.5  | .7   | .3   | .2   | .4   | 1.7  | 7.1  | 12006 | 13.8  |
| 61/62            | 4.6  | 7.8  | 7.6  | 5.6  | 1.3  | .2   | .1   | *    | *    | .1   | .2   | 2.0  | 2130  | 2.4   |
| 59/60            | .9   | 1.7  | 1.2  | .8   | .3   | .1   | .0   | .0   | .0   | *    | *    | .5   | 401   | .5    |
| 57/58            | .1   | .3   | .1   | .1   | .1   | .1   | .0   | .0   | .0   | *    | .0   | .1   | 70    | .1    |
| 55/56            | .1   | .1   | *    | .0   | *    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 14    | *     |
| 53/54            | .0   | .0   | .1   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 5     | *     |
| 51/52            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 49/50            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 47/48            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 45/46            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 43/44            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 41/42            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 39/40            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 37/38            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 35/36            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 33/34            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 31/32            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 29/30            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 27/28            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| <27              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| TOTAL            | 7296 | 6298 | 7722 | 7329 | 7645 | 6895 | 7262 | 7248 | 6548 | 7495 | 7673 | 7809 | 87220 | 100.0 |
| MEAN             | 65.4 | 64.7 | 64.9 | 65.0 | 66.3 | 68.2 | 69.9 | 71.4 | 72.4 | 72.1 | 70.0 | 67.2 | 68.1  |       |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000  | 0300 | 0600  | 0900 | 1200  | 1500 | 1800  | 2100 | MEAN | TOTAL<br>DBS |
|-----|-------|------|-------|------|-------|------|-------|------|------|--------------|
| JAN | 1021  | 1020 | 1020  | 1021 | 1021  | 1019 | 1020  | 1022 | 1021 | 4808         |
| FEB | 1018  | 1016 | 1017  | 1020 | 1019  | 1017 | 1017  | 1019 | 1018 | 4350         |
| MAR | 1018  | 1018 | 1017  | 1019 | 1019  | 1018 | 1017  | 1018 | 1018 | 5312         |
| APR | 1018  | 1018 | 1017  | 1018 | 1019  | 1017 | 1017  | 1018 | 1018 | 5034         |
| MAY | 1018  | 1017 | 1017  | 1019 | 1019  | 1018 | 1017  | 1018 | 1018 | 5135         |
| JUN | 1019  | 1017 | 1018  | 1019 | 1019  | 1018 | 1018  | 1019 | 1018 | 4605         |
| JUL | 1018  | 1017 | 1017  | 1018 | 1018  | 1017 | 1017  | 1017 | 1017 | 4884         |
| AUG | 1017  | 1015 | 1016  | 1016 | 1017  | 1016 | 1016  | 1016 | 1016 | 4912         |
| SEP | 1018  | 1017 | 1017  | 1018 | 1018  | 1018 | 1017  | 1018 | 1018 | 4423         |
| OCT | 1018  | 1016 | 1017  | 1018 | 1018  | 1017 | 1017  | 1018 | 1017 | 5113         |
| NOV | 1018  | 1017 | 1017  | 1018 | 1018  | 1016 | 1017  | 1018 | 1018 | 5098         |
| DEC | 1021  | 1020 | 1020  | 1021 | 1021  | 1020 | 1020  | 1020 | 1020 | 5259         |
| ANN | 1019  | 1017 | 1018  | 1019 | 1019  | 1018 | 1018  | 1018 | 1018 | 58933        |
| DBS | 12515 | 1111 | 12431 | 3346 | 12416 | 1170 | 12296 | 3648 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 994  | 1005 | 1011 | 1018 | 1021 | 1024 | 1029 | 1032 | 1036 |
| FEB | 995  | 1004 | 1010 | 1015 | 1018 | 1022 | 1026 | 1029 | 1036 |
| MAR | 997  | 1006 | 1010 | 1015 | 1018 | 1021 | 1025 | 1028 | 1038 |
| APR | 997  | 1006 | 1011 | 1016 | 1018 | 1020 | 1024 | 1026 | 1036 |
| MAY | 1002 | 1010 | 1013 | 1016 | 1018 | 1020 | 1023 | 1025 | 1032 |
| JUN | 1006 | 1011 | 1014 | 1017 | 1019 | 1020 | 1023 | 1025 | 1029 |
| JUL | 1005 | 1010 | 1013 | 1016 | 1017 | 1019 | 1021 | 1023 | 1027 |
| AUG | 1004 | 1009 | 1012 | 1015 | 1016 | 1018 | 1020 | 1022 | 1026 |
| SEP | 1001 | 1010 | 1013 | 1016 | 1018 | 1019 | 1022 | 1023 | 1028 |
| OCT | 1003 | 1008 | 1012 | 1016 | 1018 | 1019 | 1022 | 1024 | 1031 |
| NOV | 998  | 1005 | 1010 | 1015 | 1018 | 1021 | 1024 | 1027 | 1035 |
| DEC | 994  | 1006 | 1012 | 1018 | 1021 | 1024 | 1027 | 1030 | 1036 |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

# JANUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .2                 | .7        | .0   | .0        | .0   | .0              | .0   | .9                      | .7             | .7        | 1.8         | .2                  | 1.0        | .0              | 94.7       |
| NE       | .2                 | .3        | .2   | .0        | .0   | .0              | .0   | .7                      | .3             | .2        | 1.4         | .1                  | .7         | .4              | 96.2       |
| E        | .7                 | .4        | .4   | .0        | .0   | .0              | .1   | 1.7                     | .6             | .5        | 3.1         | .0                  | 3.6        | 2.1             | 88.4       |
| SE       | .7                 | .2        | .3   | .0        | .0   | .0              | .0   | 1.3                     | 1.0            | .3        | 4.9         | .0                  | 6.1        | 6.2             | 80.4       |
| S        | 1.5                | 1.5       | .5   | .0        | .0   | .0              | .0   | 3.5                     | 2.5            | 3.0       | 3.9         | .5                  | 1.8        | .7              | 85.0       |
| SW       | .5                 | .7        | .5   | .0        | .0   | .0              | .0   | 1.6                     | 2.8            | .8        | 2.0         | 1.0                 | 1.3        | .5              | 90.1       |
| W        | .9                 | 2.9       | .4   | .0        | .0   | .0              | .0   | 4.3                     | 1.5            | .3        | 1.2         | .0                  | 1.2        | 1.0             | 90.9       |
| NW       | 1.0                | 4.0       | .7   | .0        | .0   | .0              | .0   | 5.6                     | 2.0            | 1.0       | 1.5         | .0                  | .7         | .0              | 89.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .4                 | .0        | .4   | .0        | .0   | .0              | .0   | .4                      | .4             | .0        | 6.9         | .0                  | 3.1        | .4              | 88.8       |
| TOT PCT  | .4                 | .6        | .3   | .0        | .0   | .0              | *    | 1.3                     | .7             | .5        | 2.3         | .1                  | 1.6        | .9              | 92.5       |
| TOT OBS: | 6271               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .4                 | .4        | .1   | .0        | .0   | .0              | .0   | .9                      | .7             | 1.2       | 1.3         | .0                  | 1.2        | .7              | 94.2       |
| 06009      | .6                 | .6        | .6   | .0        | .0   | .0              | .0   | 1.8                     | 1.3            | .5        | 2.3         | .3                  | 1.1        | 1.0             | 92.0       |
| 12015      | .2                 | .6        | .2   | .0        | .0   | .0              | .1   | 1.0                     | .5             | .1        | 2.6         | .3                  | 2.0        | 1.1             | 92.4       |
| 18021      | .5                 | .9        | .2   | .0        | .0   | .0              | .0   | 1.7                     | .4             | .3        | 2.8         | .1                  | 2.3        | 1.1             | 91.3       |
| TOT PCT    | .4                 | .6        | .3   | .0        | .0   | .0              | *    | 1.3                     | .7             | .5        | 2.3         | .2                  | 1.6        | 1.0             | 92.4       |
| TOT OBS:   | 6490               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 5.1  | 3.8   | .4    | .0    | *   |       | 10.4      | 10.0     |          | 12.5       | 12.2  | 9.9   | 7.9   | 8.3   | 10.0  | 12.0  | 11.1  |
| NE       | 1.0                | 15.4 | 27.7  | 4.3   | .1    | *   |       | 48.4      | 13.5     |          | 50.5       | 48.8  | 49.7  | 46.1  | 45.9  | 46.7  | 48.7  | 49.2  |
| E        | .7                 | 8.3  | 9.4   | 1.4   | *     | .0  |       | 19.8      | 12.1     |          | 16.5       | 17.9  | 19.4  | 26.9  | 22.4  | 17.1  | 17.4  | 20.5  |
| SE       | .4                 | 2.6  | 2.0   | .2    | *     | .0  |       | 5.2       | 10.6     |          | 3.3        | 3.5   | 4.8   | 6.8   | 7.4   | 5.4   | 4.7   | 4.7   |
| S        | .5                 | 1.8  | 1.1   | .1    | *     | .0  |       | 3.5       | 9.2      |          | 3.4        | 3.0   | 3.3   | 1.7   | 4.7   | 6.6   | 3.8   | 1.9   |
| SW       | .4                 | 2.0  | 1.2   | .1    | *     | .0  |       | 3.8       | 9.8      |          | 4.2        | 7.1   | 4.1   | 2.4   | 3.9   | 4.3   | 4.1   | 2.6   |
| W        | .5                 | 1.5  | .6    | .1    | *     | .0  |       | 2.7       | 8.6      |          | 2.6        | 3.0   | 2.5   | 2.5   | 2.3   | 3.8   | 3.1   | 3.2   |
| NW       | .5                 | 1.7  | .5    | .1    | *     | .0  |       | 2.8       | 8.6      |          | 2.7        | 1.7   | 2.2   | 3.5   | 2.7   | 3.5   | 3.0   | 3.6   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.3                |      |       |       |       |     |       | 3.3       | .0       |          | 4.2        | 2.7   | 4.3   | 2.2   | 2.4   | .7    | 3.1   | 3.1   |
| TOT OBS  | 1024               | 4662 | 5646  | 809   | 17    | 3   | 12161 |           | 11.7     |          | 2330       | 148   | 2344  | 1140  | 2541  | 152   | 2395  | 1111  |
| TOT PCT  | 8.4                | 38.3 | 46.4  | 6.7   | .1    | *   |       |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|----|-------|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |       |           |          |          | 00         | 06    | 12    | 18    |
| N        | 3.4                | 5.5  | 1.5   | .1    | *  |       | 10.4      | 10.0     |          | 12.5       | 9.2   | 8.4   | 11.8  |
| NE       | 5.4                | 27.5 | 14.5  | .8    | *  |       | 48.4      | 13.5     |          | 50.4       | 48.5  | 45.9  | 48.9  |
| E        | 3.3                | 11.7 | 4.5   | .3    | *  |       | 19.8      | 12.1     |          | 16.6       | 21.8  | 22.1  | 18.4  |
| SE       | 1.5                | 2.9  | .8    | .1    | *  |       | 5.2       | 10.6     |          | 3.3        | 3.5   | 7.3   | 4.7   |
| S        | 1.3                | 1.8  | .3    | .0    | *  |       | 3.5       | 9.2      |          | 3.4        | 2.8   | 4.8   | 3.2   |
| SW       | 1.3                | 2.0  | .5    | *     | *  |       | 3.8       | 9.8      |          | 4.4        | 3.5   | 3.9   | 3.6   |
| W        | 1.3                | 1.0  | .3    | *     | *  |       | 2.7       | 8.6      |          | 2.6        | 2.5   | 2.5   | 3.1   |
| NW       | 1.3                | 1.2  | .3    | *     | *  |       | 2.8       | 8.6      |          | 2.7        | 2.6   | 2.7   | 3.2   |
| VAR      | .0                 | .0   | .0    | .0    | .0 |       | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | 3.3                |      |       |       |    |       | 3.3       | .0       |          | 4.2        | 3.6   | 2.3   | 3.1   |
| TOT OBS  | 2703               | 6515 | 2782  | 154   | 7  | 12161 |           | 11.7     |          | 2478       | 3484  | 2693  | 3506  |
| TOT PCT  | 22.2               | 53.6 | 22.9  | 1.3   | .1 |       |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 4.2  | 5.3 | 38.1 | 45.4               | 6.9   | .2    | *   | 11.6 | 100.0    | 2478      |
| 06009 | 3.6  | 4.1 | 38.5 | 46.5               | 7.2   | .1    | *   | 11.9 | 100.0    | 3484      |
| 12015 | 2.3  | 5.3 | 36.4 | 49.2               | 6.6   | .1    | .0  | 12.0 | 100.0    | 2693      |
| 18021 | 3.1  | 5.9 | 39.8 | 45.0               | 5.9   | .2    | *   | 11.4 | 100.0    | 3506      |
| TOT   | 399  | 625 | 4662 | 5646               | 809   | 17    | 3   | 11.7 |          | 12161     |
| PCT   | 3.3  | 5.1 | 38.3 | 46.4               | 6.7   | .1    | *   |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & L | TOTAL | MEAN        |
|----------|------|------|------|-------|-------|-------------|
|          |      |      |      | OBSCD | OBS   | CLOUD COVER |
| N        | 8.0  | 1.8  | 1.5  | .6    |       | 2.0         |
| NE       | 29.1 | 8.5  | 8.8  | 2.9   |       | 2.5         |
| E        | 9.0  | 2.2  | 2.1  | .9    |       | 2.2         |
| SE       | 2.5  | .6   | .8   | .6    |       | 2.7         |
| S        | 1.9  | 1.2  | 1.9  | .6    |       | 4.0         |
| SW       | 2.1  | 1.5  | 1.4  | .4    |       | 3.5         |
| W        | 1.1  | .7   | .6   | .1    |       | 3.1         |
| NW       | 1.1  | .5   | .5   | .1    |       | 3.0         |
| VAR      | .0   | .0   | .0   | .0    |       | .0          |
| CALM     | 3.5  | .6   | .4   | .2    |       | 1.6         |
| TOT OBS  | 2957 | 889  | 913  | 319   | 5078  | 2.5         |
| TOT PCT  | 58.2 | 17.5 | 18.0 | 6.3   | 100.0 |             |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | *   | .0  | .0  | .1  | .4   | .3   | .4   | *    | *    | .1    | 10.4    |       |
| NE      | .1  | .0  | .1  | .7  | 2.4  | 2.3  | 1.5  | .3   | .2   | .5    | 41.2    |       |
| E       | *   | *   | *   | .1  | .4   | .4   | .2   | .1   | *    | .4    | 12.4    |       |
| SE      | .0  | .0  | .0  | *   | .2   | .2   | .1   | .1   | *    | .1    | 3.8     |       |
| S       | .1  | .0  | .1  | .3  | .6   | .3   | .1   | .1   | .1   | .1    | 4.1     |       |
| SW      | *   | *   | .1  | .1  | .3   | .2   | .2   | .0   | *    | .1    | 4.2     |       |
| W       | .0  | .0  | .1  | .1  | .2   | .1   | *    | .0   | *    | *     | 2.1     |       |
| NW      | .0  | *   | *   | .0  | .1   | .1   | *    | *    | .0   | .0    | 1.9     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .1  | .0  | .0  | *   | .1   | .2   | .1   | *    | *    | *     | 4.3     |       |
| TOT OBS | 15  | 3   | 19  | 69  | 241  | 199  | 132  | 36   | 21   | 62    | 4281    | 5078  |
| TOT PCT | .3  | .1  | .4  | 1.4 | 4.7  | 3.9  | 2.6  | .7   | .4   | 1.2   | 84.3    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING<br>(FEET) | VSBY (NM) |         |         |         | VSBY (NM) |           |            |         |
|-------------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                   | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500        | 1.2       | 1.5     | 1.6     | 1.6     | 1.6       | 1.6       | 1.6        | 1.6     |
| = OR >5000        | 1.8       | 2.2     | 2.3     | 2.3     | 2.3       | 2.3       | 2.3        | 2.3     |
| = OR >3500        | 4.0       | 4.7     | 4.9     | 4.9     | 4.9       | 4.9       | 4.9        | 4.9     |
| = OR >2000        | 7.2       | 8.4     | 8.7     | 8.7     | 8.8       | 8.8       | 8.8        | 8.8     |
| = OR >1000        | 11.4      | 13.1    | 13.4    | 13.5    | 13.5      | 13.5      | 13.5       | 13.5    |
| = OR >600         | 12.5      | 14.3    | 14.8    | 14.8    | 14.8      | 14.9      | 14.9       | 14.9    |
| = OR >300         | 12.7      | 14.6    | 15.1    | 15.2    | 15.2      | 15.2      | 15.2       | 15.2    |
| = OR >150         | 12.7      | 14.7    | 15.2    | 15.2    | 15.3      | 15.3      | 15.3       | 15.3    |
| = OR > 0          | 12.8      | 14.7    | 15.3    | 15.3    | 15.4      | 15.4      | 15.5       | 15.6    |
| TOTAL             | 667       | 767     | 796     | 798     | 800       | 803       | 810        | 811     |

TOTAL NUMBER OF OBS: 5210

PCT FREQ NH <5/8: 84.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL |
|------|------|------|-----|-----|-----|-----|-----|-----|-------|-------|
|      |      |      |     |     |     |     |     |     |       | OBS   |
| 43.4 | 13.2 | 12.5 | 8.4 | 6.4 | 3.8 | 4.1 | 3.8 | 4.3 | .2    | 5505  |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0  | .0   | *     |              |
|              | NO PCP | *    | *    | *    | .0  | .1  | *   | *   | *   | .0  | *    | .3    |              |
|              | TOT %  | *    | *    | *    | .0  | .1  | *   | *   | *   | .0  | *    | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | *    | .1   | .2   | .1  | *   | .0  | .0  | *   | .0  | *    | .4    |              |
|              | TOT %  | *    | .1   | .2   | .1  | *   | .0  | .0  | *   | .0  | *    | .5    |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | .1   | .2   | .1  | *   | .0  | .0  | .0  | .0  | .0   | .4    |              |
|              | TOT %  | *    | .1   | .2   | .1  | *   | .0  | .0  | .0  | .0  | *    | .4    |              |
| 2<5          | PCP    | .0   | *    | *    | *   | *   | *   | *   | .0  | .0  | .0   | .1    |              |
|              | NO PCP | .2   | .8   | .5   | .5  | .2  | .1  | *   | .0  | .0  | .2   | 2.4   |              |
|              | TOT %  | .2   | .8   | .5   | .5  | .2  | .1  | *   | .0  | .0  | .2   | 2.5   |              |
| 5<10         | PCP    | .1   | .2   | .1   | .1  | .1  | .1  | .1  | .1  | .0  | *    | .8    |              |
|              | NO PCP | 1.5  | 6.6  | 3.9  | 1.8 | 1.0 | .7  | .5  | .3  | .0  | .5   | 16.9  |              |
|              | TOT %  | 1.6  | 6.8  | 4.1  | 1.9 | 1.1 | .7  | .6  | .4  | .0  | .5   | 17.7  |              |
| 10+          | PCP    | *    | .1   | .1   | *   | *   | *   | .0  | *   | .0  | .0   | .4    |              |
|              | NO PCP | 9.7  | 40.4 | 10.4 | 2.4 | 3.8 | 4.1 | 2.0 | 1.9 | .0  | 3.4  | 78.2  |              |
|              | TOT %  | 9.7  | 40.5 | 10.5 | 2.4 | 3.9 | 4.2 | 2.0 | 2.0 | .0  | 3.4  | 78.5  |              |
| TOT OBS      |        | 6255 |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        | 11.6 | 48.4 | 15.4 | 4.9 | 5.4 | 5.1 | 2.7 | 2.4 | .0  | 4.1  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | *    | .0  | .0  | *   | .0  | .0  | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | *    | .0  | .1  | *   | .0  | *   | .0  | *    | .1    |              |
|              | 11-21      | *    | *    | *    | .0  | .0  | .0  | *   | .0  | .0  | *    |       |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | *    | .0  | .1  | *   | *   | *   | .0  | *    | .3    |              |
| 1/2<1        | 0-3        | *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | .0   | .1   | *   | *   | .0  | .0  | *   | .0  | *    | .1    |              |
|              | 11-21      | *    | .1   | .1   | *   | *   | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | 22+        | .0   | .1   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | *    | .1   | .2   | .1  | *   | .0  | .0  | *   | .0  | *    | .4    |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | *    | *   | *   | .0  | .0  | .0  | .0  | *    | .1    |              |
|              | 11-21      | *    | .1   | .1   | *   | *   | .0  | .0  | .0  | .0  | *    | .2    |              |
|              | 22+        | .0   | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | TOT %      | *    | .1   | .2   | .1  | *   | .0  | .0  | .0  | .0  | *    | .4    |              |
| 2<5          | 0-3        | *    | *    | *    | *   | *   | .0  | .0  | *   | .0  | .1   | .3    |              |
|              | 4-10       | .1   | .3   | .2   | .2  | .1  | .1  | *   | .0  | .0  | 1.0  |       |              |
|              | 11-21      | *    | .4   | .3   | .2  | .1  | *   | *   | .0  | .0  | 1.1  |       |              |
|              | 22+        | .0   | .1   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .2   |       |              |
|              | TOT %      | .2   | .9   | .6   | .5  | .2  | .1  | *   | *   | .0  | .1   | 2.6   |              |
| 5<10         | 0-3        | .1   | .2   | .2   | .2  | .1  | .1  | *   | *   | .0  | .4   | 1.3   |              |
|              | 4-10       | .6   | 1.8  | 1.6  | .7  | .4  | .2  | .1  | .0  | .0  | 5.7  |       |              |
|              | 11-21      | .5   | 3.0  | 1.4  | .6  | .3  | .2  | .1  | .1  | .0  | 6.3  |       |              |
|              | 22+        | .1   | .9   | .2   | *   | *   | *   | .1  | .1  | .0  | 1.5  |       |              |
|              | TOT %      | 1.4  | 5.9  | 3.3  | 1.6 | .8  | .6  | .5  | .3  | .0  | .4   | 14.8  |              |
| 10+          | 0-3        | 1.0  | .8   | .5   | .2  | .4  | .3  | .5  | .4  | .0  | 3.2  | 7.4   |              |
|              | 4-10       | 4.3  | 12.7 | 5.9  | 1.5 | 1.6 | 2.0 | 1.3 | 1.3 | .0  | 30.6 |       |              |
|              | 11-21      | 3.7  | 25.1 | 6.3  | 1.0 | 1.0 | 1.3 | .4  | .3  | .0  | 39.1 |       |              |
|              | 22+        | .2   | 3.2  | .8   | .1  | .1  | .1  | *   | *   | .0  | 4.4  |       |              |
|              | TOT %      | 9.2  | 41.8 | 13.4 | 2.8 | 3.1 | 3.8 | 2.2 | 2.0 | .0  | 3.2  | 81.5  |              |
| TOT OBS      |            | 8880 |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            | 10.9 | 48.8 | 17.7 | 5.0 | 4.2 | 4.5 | 2.7 | 2.4 | .0  | 3.9  | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1893-1973

JANUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .1         | .1         | .0         | 1.3        | 3.4          | 2.6          | 2.3          | .4           | .1           | .5    | 11.0  | 89.0                | 1341         |
| 06009         | .5         | .0         | .6         | 1.3        | 5.2          | 3.9          | 2.3          | 1.0          | .7           | 1.3   | 16.8  | 83.2                | 1241         |
| 12015         | .1         | .1         | .5         | 1.4        | 6.1          | 5.2          | 2.5          | .8           | .3           | 1.3   | 18.3  | 81.7                | 1490         |
| 18021         | .4         | .1         | .4         | 1.3        | 3.2          | 3.3          | 2.8          | .6           | .4           | 1.5   | 14.0  | 86.0                | 1358         |
| TOT           | 16         | 3          | 19         | 72         | 246          | 206          | 134          | 37           | 21           | 63    | 817   | 4613                | 5430         |
| PCT           | .3         | .1         | .3         | 1.3        | 4.5          | 3.8          | 2.5          | .7           | .4           | 1.2   | 15.0  | 85.0                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .2    | .2  | 2.0 | 14.9 | 82.5 | 2015         |
| 06009         | .2   | .5    | .3  | 2.2 | 16.7 | 80.2 | 2411         |
| 12015         | .3   | .5    | .3  | 3.0 | 12.9 | 83.0 | 2169         |
| 18021         | .5   | .5    | .6  | 3.2 | 15.1 | 80.1 | 2504         |
| TOT           | 26   | 39    | 32  | 238 | 1361 | 7403 | 9099         |
| PCT           | .3   | .4    | .4  | 2.6 | 15.0 | 81.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .2           | .2         | 3.9         | 9.4             | 86.7               | 1290         |
| 06009         | .4           | 1.0        | 4.6         | 14.9            | 80.5               | 1175         |
| 12015         | .1           | 1.0        | 5.4         | 16.2            | 78.4               | 1436         |
| 18021         | .5           | 1.1        | 5.8         | 11.6            | 82.6               | 1309         |
| TOT           | 16           | 45         | 258         | 680             | 4272               | 5210         |
| PCT           | .3           | .9         | 5.0         | 13.1            | 82.0               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | *     | .0    | .0    | .0    | *     | .0    | .0     | 2            | *           |
| 75/79  | .0   | .0    | *     | .1    | *     | *     | .1    | .0     | 13           | .3          |
| 70/74  | .0   | *     | *     | .7    | 1.5   | 2.2   | 1.3   | .5     | 299          | 6.3         |
| 65/69  | .0   | *     | .6    | 4.2   | 11.9  | 19.3  | 17.8  | 6.8    | 2861         | 60.5        |
| 60/64  | .0   | *     | .3    | 1.2   | 6.1   | 11.8  | 8.3   | 4.7    | 1538         | 32.5        |
| 55/59  | .0   | .0    | .0    | .0    | .1    | .1    | .1    | .1     | 19           | .4          |
| TOTAL  | 0    | 4     | 41    | 293   | 930   | 1583  | 1304  | 576    | 4732         | 100.0       |
| PCT    | .0   | .1    | .9    | 6.2   | 19.7  | 33.5  | 27.6  | 12.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|------|-----|-----|-----|-----|-----|-----|------|
| .0   | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| .0   | .1   | *    | *   | *   | *   | *   | *   | .0  | *    |
| .7   | 1.6  | 1.0  | .8  | .7  | .6  | .4  | .3  | .0  | .3   |
| 6.4  | 27.1 | 10.5 | 3.1 | 3.8 | 3.9 | 2.0 | 1.5 | .0  | 2.2  |
| 4.3  | 20.5 | 4.2  | .6  | .7  | .6  | .3  | .4  | .0  | .8   |
| .1   | .2   | *    | .1  | .0  | .0  | .0  | .0  | .0  | *    |
| 11.4 | 49.5 | 15.7 | 4.6 | 5.2 | 5.2 | 2.8 | 2.2 | .0  | 3.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 71  | 68  | 65  | 61 | 59 | 46  | 64.9 | 2518         |
| 06009         | 75  | 70  | 68  | 64  | 61 | 58 | 48  | 64.6 | 3501         |
| 12015         | 84  | 76  | 72  | 67  | 62 | 60 | 54  | 67.0 | 2672         |
| 18021         | 83  | 75  | 72  | 66  | 62 | 60 | 49  | 66.3 | 3484         |
| TOT           | 84  | 74  | 71  | 65  | 61 | 59 | 46  | 65.7 | 12175        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 3.0   | 15.5  | 34.2  | 31.1  | 16.2   | 79   | 1215         |
| 06009         | .0   | 6.5   | 17.1  | 29.4  | 29.9  | 17.2   | 78   | 1172         |
| 12015         | .0   | 12.5  | 23.6  | 33.9  | 21.5  | 8.6    | 73   | 1261         |
| 18021         | .0   | 6.1   | 21.2  | 35.6  | 28.6  | 8.5    | 75   | 1246         |
| TOT           | 0    | 346   | 949   | 1631  | 1356  | 612    | 76   | 4894         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FDG | WD<br>FDG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | *        | 3     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | *        | .1       | *        | *        | 16    | .0       | .3        |
| 9/10               | .0       | .0       | .0       | .0       | *        | .1       | .2       | .2       | .1       | .0       | 29    | .0       | .5        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .1       | .3       | .3       | *        | .0       | 50    | .1       | .8        |
| 6                  | .0       | .0       | .0       | .0       | .1       | .2       | .2       | .2       | *        | .0       | 40    | *        | .7        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .5       | .8       | .2       | .0       | *        | 96    | .1       | 1.6       |
| 4                  | .0       | .0       | .0       | .0       | .3       | 1.3      | 1.4      | .2       | .0       | .0       | 181   | .1       | 3.0       |
| 3                  | .0       | .0       | .0       | .0       | .4       | 2.4      | 1.7      | *        | .0       | .0       | 260   | .2       | 4.3       |
| 2                  | .0       | .0       | .0       | *        | 1.1      | 4.7      | 2.2      | .1       | .0       | .0       | 465   | .2       | 7.9       |
| 1                  | .0       | .0       | .0       | .0       | 2.2      | 7.3      | 2.3      | .1       | .0       | .0       | 676   | .2       | 11.5      |
| 0                  | .0       | .0       | .0       | .1       | 4.8      | 10.7     | 1.7      | .1       | *        | .0       | 1001  | .4       | 17.0      |
| -1                 | .0       | .0       | .0       | .2       | 6.0      | 10.6     | .7       | *        | .0       | .0       | 1007  | .4       | 17.2      |
| -2                 | .0       | .0       | .0       | .2       | 6.2      | 7.2      | .3       | *        | .0       | .0       | 802   | .3       | 13.6      |
| -3                 | .0       | .0       | .0       | .2       | 5.2      | 3.0      | .1       | *        | .0       | .0       | 490   | .2       | 8.3       |
| -4                 | .0       | .0       | .0       | .2       | 3.4      | 1.3      | .1       | .0       | .0       | .0       | 287   | .1       | 4.9       |
| -5                 | .0       | .0       | .0       | .3       | 1.9      | .8       | .1       | .0       | .0       | .0       | 176   | .1       | 3.0       |
| -6                 | .0       | .0       | .0       | .2       | .6       | .2       | *        | .0       | .0       | .0       | 65    | *        | 1.1       |
| -7/-8              | .0       | .0       | .1       | .3       | .6       | .2       | .0       | .0       | .0       | .0       | 66    | *        | 1.1       |
| -9/-10             | .0       | .0       | .1       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | 14    | .0       | .2        |
| -11/-13            | *        | .1       | .1       | *        | *        | .0       | .0       | .0       | .0       | .0       | 14    | .0       | .2        |
| -14/-16            | *        | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | .1        |
| TOTAL              | 2        |          | 12       |          | 1891     | 702      |          | 10       |          |          | 5743  | 141      | 5602      |
| PCT                | *        | .1       | .2       | 2.0      | 32.9     | 50.7     | 12.2     | 1.5      | .2       | .1       | 100.0 | 2.5      | 97.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | 1.0 | 1.0  | .0    | .0    | .0    | .0  | 2.0  | .6  | 1.9  | .1    | .0    | .0    | .0  | 2.6  |
| 1-2     | .3  | 2.5  | .7    | .0    | .0    | .0  | 3.5  | .2  | 7.2  | 3.7   | .0    | .0    | .0  | 11.0 |
| 3-4     | .0  | 2.1  | 2.4   | .0    | .0    | .0  | 4.4  | *   | 4.5  | 10.8  | .5    | .0    | .0  | 15.8 |
| 5-6     | .0  | .3   | 1.1   | .1    | .0    | .0  | 1.5  | *   | .9   | 8.0   | .8    | .0    | .0  | 9.6  |
| 7       | .0  | *    | .4    | .1    | .0    | .0  | .5   | .0  | .1   | 3.3   | 1.2   | .0    | .0  | 4.7  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .6    | .6    | .0    | .0  | 1.3  |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0   | .2    | .2    | *     | .0  | .5   |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | *    |
| 17-19   | .0  | *    | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.2 | 5.9  | 4.8   | .4    | .0    | .0  | 12.2 | .9  | 14.5 | 26.8  | 3.5   | *     | .0  | 45.6 |

| HGT     | E   |      |       |       |       |     |      | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .4  | 1.3  | .0    | .0    | .0    | .0  | 1.7  | .4  | .5   | *     | .0    | .0    | .0  | .9  |
| 1-2     | .3  | 3.9  | 1.2   | .0    | .0    | .0  | 5.4  | *   | 1.2  | .4    | .0    | .0    | .0  | 1.7 |
| 3-4     | *   | 1.7  | 2.8   | *     | .0    | .0  | 4.6  | .0  | .5   | .6    | .0    | .0    | .0  | 1.2 |
| 5-6     | .0  | .3   | 1.6   | .2    | .0    | .0  | 2.1  | .0  | *    | .6    | .1    | .0    | .0  | .7  |
| 7       | .0  | .0   | .6    | .1    | .0    | .0  | .6   | .0  | *    | .2    | .1    | .0    | .0  | .3  |
| 8-9     | .0  | .0   | .1    | *     | .0    | .0  | .2   | .0  | .0   | .1    | *     | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 7.2  | 6.4   | .4    | .0    | .0  | 14.7 | .4  | 2.3  | 2.0   | .2    | .0    | .0  | 4.9 |

PERIOD: (OVER-ALL) 1963-1973

JANUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .6   | .1    | .0    | .0    | .0  | 1.0 | .3  | .5   | .6    | .0    | .0    | .0  | .8  |
| 1-2     | .1  | 1.5  | .4    | .0    | .0    | .0  | 2.1 | .1  | 1.5  | .6    | .0    | .0    | .0  | 2.2 |
| 3-4     | .1  | .9   | .9    | .0    | .0    | .0  | 1.8 | .*  | .7   | 1.1   | .*    | .0    | .0  | 1.9 |
| 5-6     | .0  | .1   | .4    | .*    | .0    | .0  | .5  | .0  | .*   | .6    | .1    | .0    | .0  | .7  |
| 7       | .0  | .*   | .2    | .*    | .0    | .0  | .3  | .0  | .0   | .1    | .*    | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .0    | .0    | .*    | .0  | .*  | .0  | .0   | .0    | .*    | .*    | .0  | .*  |
| 10-11   | .0  | .*   | .1    | .*    | .0    | .0  | .1  | .0  | .0   | .*    | .0    | .0    | .0  | .*  |
| 12      | .0  | .0   | .0    | .*    | .0    | .0  | .*  | .0  | .0   | .0    | .*    | .0    | .0  | .*  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .*    | .*    | .0  | .*  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 3.1  | 2.1   | .1    | .*    | .0  | 5.8 | .5  | 2.7  | 2.5   | .2    | .*    | .0  | 5.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .4  | .2   | .0    | .0    | .0    | .0  | .6  | .2  | .4   | .0    | .0    | .0    | .0  | .6  |           |
| 1-2     | .1  | 1.0  | .2    | .0    | .0    | .0  | 1.3 | .1  | .7   | .1    | .0    | .0    | .0  | .9  |           |
| 3-4     | .*  | .2   | .3    | .0    | .0    | .0  | .5  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |           |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .*   | .1    | .0    | .0    | .0  | .1  |           |
| 7       | .0  | .0   | .*    | .0    | .0    | .0  | .*  | .0  | .0   | .*    | .0    | .0    | .0  | .*  |           |
| 8-9     | .0  | .0   | .*    | .0    | .0    | .0  | .*  | .0  | .0   | .*    | .0    | .0    | .0  | .*  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .*  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .*  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .6  | 1.4  | .6    | .0    | .*    | .0  | 2.7 | .3  | 1.2  | .3    | .0    | .0    | .0  | 1.8 | 93.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 10.8 | 6.7  | .2    | .0    | .0    | .0  | 17.8  |         |
| 1-2     | 1.6  | 19.0 | 7.2   | .0    | .0    | .0  | 27.9  |         |
| 3-4     | .2   | 10.4 | 18.6  | .6    | .0    | .0  | 29.8  |         |
| 5-6     | .*   | 1.6  | 12.3  | 1.2   | .0    | .0  | 15.1  |         |
| 7       | .0   | .2   | 4.8   | 1.5   | .0    | .0  | 6.5   |         |
| 8-9     | .0   | .0   | 1.0   | .8    | .*    | .0  | 1.9   |         |
| 10-11   | .0   | .1   | .3    | .4    | .*    | .0  | .8    |         |
| 12      | .0   | .0   | .*    | .1    | .0    | .0  | .2    |         |
| 13-16   | .0   | .0   | .*    | .*    | .0    | .0  | .1    |         |
| 17-19   | .0   | .0   | .*    | .0    | .0    | .0  | .*    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 12.7 | 38.0 | 44.6  | 4.6   | .1    | .0  | 100.0 | 3273    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           |     |      |      |      |      |     |       |     |       |       |       |       |       |       |       |       |       |       |     |       |          |
| 6-7          | 1.9 | 8.7  | 11.9 | 5.8  | 2.0  | .6  | .3    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1281  | 3        |
| 8-9          | .*  | 1.1  | 5.6  | 7.0  | 4.2  | 1.7 | .8    | .*  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 842   | 5        |
| 10-11        | .0  | .8   | 1.7  | 2.8  | 3.1  | 1.0 | .8    | .2  | .2    | .*    | .*    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 437   | 6        |
| 12-13        | .0  | .7   | 1.1  | 1.2  | 1.1  | .7  | .7    | .2  | .1    | .*    | .*    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 245   | 6        |
| >13          | .0  | .0   | 1.1  | 1.2  | .7   | .7  | .5    | .1  | .2    | .1    | .*    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 188   | 7        |
| INGET        | 5.6 | 4.6  | 6.4  | 3.6  | 2.7  | 1.1 | .6    | .1  | .1    | .*    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1014  | 3        |
| TOTAL        | 305 | 652  | 1132 | 898  | 596  | 247 | 167   | 42  | 39    | 6     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4087  | 4        |
| PCT          | 7.5 | 16.0 | 27.7 | 22.0 | 14.6 | 6.0 | 4.1   | 1.0 | 1.0   | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1853-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | .1   | .2        | .0   | .0        | .0   | .0              | .0   | .2              | .1             | .2                      | 1.2         | .1                  | .7         | .1              | 97.3       |  |
| NE                 | .1   | .1        | .2   | .0        | .0   | .0              | .0   | .3              | .1             | .2                      | .9          | .0                  | .6         | .2              | 97.6       |  |
| E                  | .0   | .3        | .3   | .0        | .0   | .0              | .0   | .6              | .2             | .7                      | 2.3         | .0                  | 1.7        | .4              | 94.2       |  |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .2                      | 6.3         | .8                  | 2.1        | 1.1             | 89.5       |  |
| S                  | 2.4  | 1.0       | .4   | .0        | .0   | .0              | .0   | 3.3             | 1.1            | .9                      | 2.0         | 1.0                 | .5         | .0              | 91.7       |  |
| SW                 | .7   | .9        | .5   | .0        | .0   | .0              | .0   | 2.1             | 1.4            | .6                      | 1.9         | .0                  | .6         | .0              | 93.4       |  |
| W                  | .2   | .7        | .4   | .0        | .0   | .0              | .0   | 1.3             | .9             | .2                      | .5          | .0                  | .0         | .2              | 97.0       |  |
| NW                 | .2   | .7        | .4   | .0        | .0   | .0              | .0   | 1.4             | .3             | .6                      | 1.1         | .0                  | .2         | .0              | 96.6       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .3             | .3                      | 4.9         | 1.7                 | 1.7        | .6              | 90.5       |  |
| TOT PCT            | .2   | .3        | .2   | .0        | .0   | .0              | .0   | .7              | .3             | .3                      | 1.5         | .2                  | .7         | .2              | 96.2       |  |
| TOT OBS:           | 6538 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                       |              |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|-----------------------|--------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FGG WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 0000          | .2                 | .3           | .4   | .0           | .0   | .0                    | .0   | .9                      | .7                | .7           | 1.4            | .2                        | .6            | .4                    | 95.2         |                  |
| 0600          | .3                 | .3           | .5   | .0           | .0   | .0                    | .0   | 1.1                     | .2                | .5           | 1.6            | .2                        | .5            | .2                    | 95.5         |                  |
| 1200          | .1                 | .3           | .1   | .0           | .0   | .0                    | .0   | .4                      | .2                | .1           | 2.0            | .1                        | .7            | .2                    | 96.4         |                  |
| 1800          | .1                 | .3           | .0   | .0           | .0   | .0                    | .0   | .4                      | .2                | .2           | 1.4            | .2                        | 1.0           | .2                    | 96.6         |                  |
| TOT PCT       | .2                 | .3           | .3   | .0           | .0   | .0                    | .0   | .7                      | .3                | .4           | 1.6            | .2                        | .7            | .2                    | 95.9         |                  |
| TOT OBS:      | 6788               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                       |              |                  |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 8.4  | 6.5   | 1.0   | .0    | .0  |       | 17.1      | 10.8     |          | 18.6       | 22.6  | 16.3  | 14.7  | 15.1  | 23.4  | 18.5  | 17.8  |
| NE       | 1.1                | 14.3 | 25.7  | 5.4   | .2    | .0  |       | 46.7      | 13.9     |          | 45.9       | 46.0  | 46.7  | 51.2  | 45.4  | 37.9  | 44.9  | 51.9  |
| E        | .4                 | 4.7  | 4.3   | .4    | .0    | .0  |       | 10.2      | 11.8     |          | 8.1        | .0    | 9.6   | 15.0  | 12.8  | 10.4  | 8.8   | 9.7   |
| SE       | .2                 | 1.3  | .4    | .0    | .0    | .0  |       | 2.0       | 8.0      |          | 1.5        | 1.8   | 1.9   | 2.0   | 3.2   | 1.8   | 1.5   | 1.6   |
| S        | .4                 | 1.4  | .5    | .0    | .0    | .0  |       | 2.4       | 8.0      |          | 2.4        | 2.6   | 2.2   | 2.0   | 3.1   | 2.7   | 2.4   | 1.5   |
| SW       | .7                 | 3.3  | 1.5   | .2    | .0    | .0  |       | 5.7       | 8.9      |          | 6.0        | 8.3   | 5.7   | 3.7   | 6.3   | 6.1   | 5.8   | 4.5   |
| W        | .9                 | 3.2  | 1.2   | .1    | .0    | .0  |       | 5.3       | 8.1      |          | 5.1        | 8.7   | 5.4   | 4.4   | 4.9   | 6.1   | 6.2   | 5.0   |
| NW       | .7                 | 4.3  | 1.5   | .2    | .0    | .0  |       | 6.7       | 8.6      |          | 7.0        | 4.4   | 6.7   | 5.7   | 5.7   | 9.6   | 8.0   | 6.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.9                |      |       |       |       |     |       | 3.9       | .0       |          | 5.3        | 5.6   | 5.4   | 1.2   | 3.6   | 2.1   | 3.9   | 1.5   |
| TOT OBS  | 1147               | 4911 | 4997  | 925   | 32    | 0   | 12012 |           | 11.4     |          | 2387       | 124   | 2307  | 1061  | 2539  | 140   | 2409  | 1045  |
| TOT PCT  | 9.5                | 40.9 | 41.6  | 7.7   | .3    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |      |
|----------|------|--------------------|-------|-------|----------|-------|--------------|-------------|-------------|------------|----------|----------|------|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |       |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |      |
| N        | 4.7  | 9.3                | 2.8   | 1.2   | .0       |       | 17.1         | 10.8        | 18.8        | 15.8       | 15.5     | 15.5     | 18.3 |
| NE       | 5.1  | 25.4               | 14.8  | 1.3   | .0       |       | 46.7         | 13.9        | 45.9        | 48.1       | 45.0     | 47.0     |      |
| E        | 2.0  | 5.9                | 2.1   | .2    | .0       |       | 10.2         | 11.8        | 7.7         | 11.3       | 12.7     | 9.1      |      |
| SE       | 1.0  | .9                 | .2    | .0    | .0       |       | 2.0          | 8.0         | 1.5         | 1.9        | 3.1      | 1.5      |      |
| S        | 1.2  | 1.1                | .2    | .0    | .0       |       | 2.4          | 8.0         | 2.6         | 2.1        | 3.1      | 2.2      |      |
| SW       | 2.5  | 2.6                | .6    | .1    | .0       |       | 5.7          | 8.9         | 6.1         | 3.1        | 6.2      | 5.4      |      |
| W        | 2.4  | 2.5                | .4    | .0    | .0       |       | 5.3          | 8.1         | 5.3         | 3.1        | 4.9      | 5.8      |      |
| NW       | 2.7  | 3.5                | .5    | .0    | .0       |       | 6.7          | 8.6         | 6.8         | 6.4        | 5.9      | 7.5      |      |
| VAR      | .0   | .0                 | .0    | .0    | .0       |       | .0           | .0          | .0          | .0         | .0       | .0       |      |
| CALM     | 3.9  |                    |       |       |          |       | 3.9          | .0          | 5.3         | 4.1        | 3.5      | 3.2      |      |
| TOT OBS  | 3056 | 6130               | 2596  | 230   | 0        | 12012 |              | 11.4        | 2511        | 3368       | 2679     | 3454     |      |
| TOT PCT  | 25.4 | 51.0               | 21.6  | 1.9   | .0       |       | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |      |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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24.7N 16.9W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 5.3  | 6.7 | 41.1 | 38.7               | 8.0   | .2    | .0  | 11.1  | 100.0    | 2511      |
| 06009 | 4.1  | 5.1 | 40.6 | 41.6               | 8.2   | .4    | .0  | 11.5  | 100.0    | 3368      |
| 12015 | 3.5  | 5.6 | 40.0 | 42.9               | 7.8   | .3    | .0  | 11.0  | 100.0    | 2679      |
| 18021 | 3.2  | 5.3 | 41.7 | 42.7               | 7.0   | .1    | .0  | 11.4  | 100.0    | 3454      |
| TOT   | 474  | 673 | 4911 | 4997               | 425   | 32    | 0   | 11.4  |          | 12012     |
| PCT   | 3.9  | 5.6 | 40.9 | 41.6               | 7.7   | .3    | .0  | 100.0 |          |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 13.2 | 3.3  | 2.8  | .5   |           | 2.0              |
| NE       | 26.5 | 6.5  | 6.2  | 1.6  |           | 2.1              |
| E        | 4.1  | 1.3  | 1.1  | .4   |           | 2.3              |
| SE       | .9   | .2   | .5   | .2   |           | 3.4              |
| S        | 1.4  | .3   | .9   | .4   |           | 3.5              |
| SW       | 3.5  | 1.2  | 1.7  | .9   |           | 3.4              |
| W        | 3.8  | 1.6  | 1.0  | .2   |           | 2.4              |
| NW       | 4.9  | 2.0  | 1.0  | .2   |           | 2.3              |
| VAR      | .0   | .0   | .0   | .0   |           | 2.4              |
| CALM     | 3.4  | .9   | 1.1  | .3   |           | 2.3              |
| TOT OBS  | 3292 | 926  | 873  | 249  | 5340      |                  |
| TOT PCT  | 61.6 | 17.3 | 16.3 | 4.7  | 100.0     |                  |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .1  | *   | *   | .2  | .5   | .7   | .3   | .1   | *    | .2    | 17.7    |       |
| NE      | .1  | .0  | *   | .4  | 1.3  | 1.6  | 1.2  | .2   | .1   | .3    | 35.7    |       |
| E       | *   | .0  | .0  | *   | .2   | .2   | .2   | *    | .1   | .1    | 6.0     |       |
| SE      | *   | .0  | *   | *   | .1   | *    | .1   | *    | .1   | .1    | 1.4     |       |
| S       | .0  | *   | *   | .1  | .3   | .2   | .1   | .1   | .1   | .1    | 2.1     |       |
| SW      | .1  | .0  | .1  | .2  | .6   | .4   | .3   | .1   | .1   | .2    | 5.4     |       |
| W       | *   | .0  | *   | .1  | .3   | .1   | .1   | *    | .1   | .1    | 5.8     |       |
| NW      | *   | .0  | .0  | .1  | .2   | .3   | .1   | *    | *    | .1    | 7.3     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .1  | .0  | *   | .1  | .3   | .3   | .1   | *    | .1   | .1    | 4.7     |       |
| TOT OBS | 27  | 2   | 7   | 56  | 203  | 197  | 132  | 32   | 28   | 62    | 4594    | 5340  |
| TOT PCT | .5  | *   | .1  | 1.0 | 3.8  | 3.7  | 2.5  | .6   | .5   | 1.2   | 86.0    | 100.0 |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING (FEET) | VSBY (NH) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500     | 1.3       | 1.7     | 1.7     | 1.7     | 1.7       | 1.7       | 1.7        | 1.7     |
| = OR >5000     | 1.8       | 2.3     | 2.3     | 2.3     | 2.3       | 2.3       | 2.3        | 2.3     |
| = OR >3500     | 3.9       | 4.6     | 4.7     | 4.7     | 4.7       | 4.7       | 4.7        | 4.7     |
| = OR >2000     | 7.3       | 8.3     | 8.5     | 8.5     | 8.5       | 8.5       | 8.5        | 8.5     |
| = OR >1000     | 10.8      | 12.1    | 12.4    | 12.4    | 12.4      | 12.4      | 12.4       | 12.4    |
| = OR >600      | 11.7      | 13.1    | 13.4    | 13.4    | 13.4      | 13.4      | 13.4       | 13.4    |
| = OR >300      | 11.8      | 13.2    | 13.5    | 13.5    | 13.5      | 13.5      | 13.5       | 13.5    |
| = OR >150      | 11.8      | 13.3    | 13.5    | 13.5    | 13.5      | 13.6      | 13.6       | 13.6    |
| = OR >0        | 11.8      | 13.4    | 13.6    | 13.6    | 13.9      | 13.9      | 14.1       | 14.1    |
| TOTAL          | 650       | 737     | 758     | 760     | 762       | 765       | 773        | 773     |

TOTAL NUMBER OF OBS: 5489

PCT FREQ NH <5/8: 85.9

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----------|
| 39.2 | 16.9 | 13.7 | 9.8 | 5.8 | 3.9 | 4.4 | 3.1 | 2.8 | .5  | 5798      |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 8

|           |        | PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY |       |       |       |       |       |       |       |       |       |       | TOTAL OBS |
|-----------|--------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|
| VSBY (NM) |        | N   | NE    | E     | SE    | S     | SW    | W     | NW    | VAR   | CALM  | PCT   |           |
| <1/2      | PCP    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    |           |
|           | NO PCP | * * *   | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1    | .3        |
|           | TOT %  | * * *   | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1    | .3        |
| 1/2<1     | PCP    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    |           |
|           | NO PCP | .1  | .1    | .1    | * * * | .0    | .0    | .0    | * * * | .0    | * * * | .5    | .5        |
|           | TOT %  | .1  | .1    | .1    | * * * | .0    | .0    | .0    | * * * | .0    | * * * | .5    | .5        |
| 1<2       | PCP    | .0  | .0    | .0    | .0    | * * * | * * * | * * * | .0    | .0    | .0    | * * * |           |
|           | NO PCP | * * *   | .1    | * * * | .0    | .0    | .0    | * * * | * * * | .0    | * * * | .2    | .2        |
|           | TOT %  | * * *   | .1    | * * * | .0    | .0    | .0    | * * * | * * * | .0    | * * * | .2    | .2        |
| 2<5       | PCP    | .0  | .0    | .0    | .0    | * * * | * * * | .0    | .0    | .0    | .0    | * * * |           |
|           | NO PCP | .2  | .6    | .1    | .1    | .1    | .1    | * * * | .1    | .0    | .1    | 1.4   | 1.4       |
|           | TOT %  | .2  | .6    | .1    | .1    | .1    | .1    | * * * | .1    | .0    | .1    | 1.4   | 1.4       |
| 5<10      | PCP    | * * *   | .1    | * * * | .0    | .1    | .1    | * * * | .1    | .0    | .0    | .4    |           |
|           | NO PCP | 3.1   | 7.7   | 1.4   | .4    | .4    | .7    | .4    | .8    | .0    | .7    | 15.5  | 15.5      |
|           | TOT %  | 3.1   | 7.7   | 1.4   | .4    | .4    | .8    | .5    | .9    | .0    | .7    | 15.9  | 15.9      |
| 10+       | PCP    | * * *   | .1    | * * * | .0    | * * * | * * * | * * * | * * * | .0    | .0    | .2    |           |
|           | NO PCP | 15.8  | 33.0  | 5.8   | 1.3   | 2.5   | 6.2   | 5.7   | 6.9   | .0    | 4.3   | 81.5  | 81.5      |
|           | TOT %  | 15.8  | 33.0  | 5.8   | 1.3   | 2.5   | 6.2   | 5.8   | 6.9   | .0    | 4.3   | 81.7  | 81.7      |
| TOT OBS   |        |   |       |       |       |       |       |       |       |       |       |       | 6530      |
| TOT PCT   |        | 19.3  | 41.6  | 7.5   | 1.8   | 3.1   | 7.2   | 6.3   | 7.9   | .0    | 5.3   | 100.0 |           |

TABLE 9

|           |         | PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY |       |       |       |       |       |       |       |     |       |       | TOTAL OBS |
|-----------|---------|--|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----------|
| VSBY (NM) | SPD KTS | N  | NE    | E     | SE    | S     | SW    | W     | NW    | VAR | CALM  | PCT   |           |
| <1/2      | 0-3     | * * *  | * * * | .0    | .0    | .0    | * * * | .0    | .0    | .0  | .1    | .1    |           |
|           | 4-10    | * * *  | * * * | .0    | * * * | .1    | .0    | .0    | .0    | .0  | .0    | .1    |           |
|           | 11-21   | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .0    |           |
|           | 22+     | .0   | * * * | .0    | * * * | * * * | .0    | .0    | .0    | .0  | .0    | .1    |           |
|           | TOT %   | .1   | .1    | .0    | * * * | .1    | .0    | .0    | .0    | .0  | .1    | .3    |           |
| 1/2<1     | 0-3     | * * *  | * * * | .0    | .0    | .0    | .0    | * * * | .0    | .0  | * * * | .1    |           |
|           | 4-10    | .1   | * * * | * * * | .0    | .0    | .0    | .0    | * * * | .0  | .0    | .1    |           |
|           | 11-21   | * * *  | .1    | * * * | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .1    |           |
|           | 22+     | * * *  | * * * | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | * * * |           |
|           | TOT %   | .1   | .1    | .1    | * * * | .0    | .0    | .0    | * * * | .0  | * * * | .4    |           |
| 1<2       | 0-3     | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .1    | .1    |           |
|           | 4-10    | * * *  | .1    | * * * | * * * | * * * | * * * | * * * | * * * | .0  | .0    | .1    |           |
|           | 11-21   | * * *  | .1    | * * * | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .1    |           |
|           | 22+     | * * *  | * * * | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | * * * |           |
|           | TOT %   | * * *  | .1    | .1    | * * * | * * * | * * * | * * * | * * * | .0  | .1    | .3    |           |
| 2<5       | 0-3     | * * *  | * * * | * * * | .0    | .0    | * * * | .0    | * * * | .0  | .1    | .2    |           |
|           | 4-10    | .2   | .2    | * * * | .1    | * * * | .1    | * * * | .1    | .0  | .0    | .6    |           |
|           | 11-21   | .1   | .3    | .1    | * * * | * * * | * * * | .0    | .0    | .0  | .0    | .5    |           |
|           | 22+     | .1   | .2    | .0    | * * * | * * * | * * * | .0    | .0    | .0  | .0    | .3    |           |
|           | TOT %   | .3   | .6    | .1    | .1    | .1    | .1    | * * * | .1    | .0  | .1    | 1.6   |           |
| 5<10      | 0-3     | .1   | .1    | .1    | * * * | * * * | * * * | * * * | .1    | .0  | .7    | 1.2   |           |
|           | 4-10    | 1.0  | 1.6   | .6    | .2    | .2    | .4    | .3    | .4    | .0  | .0    | 4.7   |           |
|           | 11-21   | 1.2  | 4.6   | .7    | .1    | .1    | .3    | .1    | .2    | .0  | .0    | 7.2   |           |
|           | 22+     | .3   | 1.1   | .1    | * * * | * * * | .1    | * * * | * * * | .0  | .0    | 1.7   |           |
|           | TOT %   | 2.6  | 7.4   | 1.5   | .3    | .4    | .8    | .4    | .7    | .0  | .7    | 14.8  |           |
| 10+       | 0-3     | 1.0  | .9    | .4    | .2    | .4    | .6    | .9    | .6    | .0  | 3.7   | 8.7   |           |
|           | 4-10    | 7.8  | 11.6  | 3.9   | 1.0   | 1.4   | 3.3   | 3.1   | 4.2   | .0  | .0    | 36.4  |           |
|           | 11-21   | 5.6  | 19.5  | 2.9   | .4    | .4    | 1.2   | 1.0   | 1.3   | .0  | .0    | 32.3  |           |
|           | 22+     | .6   | 3.7   | .4    | .0    | * * * | .1    | .1    | .1    | .0  | .0    | 5.1   |           |
|           | TOT %   | 15.0   | 35.7  | 7.5   | 1.6   | 2.3   | 5.3   | 5.1   | 6.3   | .0  | 3.7   | 82.5  |           |
| TOT OBS   |         |  |       |       |       |       |       |       |       |     |       |       | 8966      |
| TOT PCT   |         | 18.1   | 44.1  | 9.3   | 2.1   | 2.7   | 6.3   | 5.6   | 7.2   | .0  | 4.7   | 100.0 |           |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1955-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .6         | .1         | .1         | .8         | 3.7          | 2.5          | 1.1          | .4           | .7           | 1.4   | 11.5  | 88.5               | 1396         |
| 06009         | .6         | .0         | .2         | 1.5        | 4.1          | 4.0          | 2.8          | .2           | .7           | 1.4   | 15.5  | 84.5               | 1310         |
| 12015         | .5         | .0         | .1         | .8         | 4.2          | 5.1          | 3.0          | .6           | .3           | 1.2   | 15.7  | 84.3               | 1543         |
| 18021         | .4         | .1         | .2         | 1.0        | 2.8          | 2.8          | 2.4          | 1.0          | .4           | .7    | 11.8  | 88.2               | 1481         |
| TOT           | 30         | 2          | 8          | 57         | 213          | 207          | 135          | 33           | 29           | 66    | 780   | 4950               | 5730         |
| PCT           | .5         | *          | .1         | 1.0        | 3.7          | 3.6          | 2.4          | .6           | .5           | 1.2   | 13.6  | 86.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .4    | .2  | 2.1 | 14.5 | 82.6 | 2078         |
| 06009         | .3   | .6    | .2  | 1.9 | 17.2 | 79.8 | 2416         |
| 12015         | .5   | .5    | .4  | 1.0 | 11.4 | 86.3 | 2205         |
| 18021         | .4   | .4    | .5  | 1.5 | 15.3 | 82.0 | 2518         |
| TOT           | 31   | 43    | 31  | 147 | 1355 | 7610 | 9217         |
| PCT           | .3   | .5    | .3  | 1.6 | 14.7 | 82.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .5           | .7         | 3.3         | 10.1            | 86.6              | 1323         |
| 06009         | .6           | 1.0        | 4.5         | 13.5            | 82.0              | 1245         |
| 12015         | .5           | .7         | 2.3         | 14.6            | 83.1              | 1489         |
| 18021         | .4           | .7         | 2.7         | 10.3            | 86.9              | 1432         |
| TOT           | 29           | 43         | 173         | 666             | 4650              | 5489         |
| PCT           | .5           | .8         | 3.2         | 12.1            | 84.7              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 75/79  | .0   | .0    | *     | .1    | .1    | .1    | *     | *      | 18           | .4          |
| 70/74  | .0   | .0    | *     | .4    | 1.9   | 3.2   | 3.0   | .6     | 445          | 9.3         |
| 65/69  | .0   | .0    | .3    | 2.2   | 7.7   | 18.9  | 20.7  | 8.0    | 2771         | 57.8        |
| 60/64  | .0   | .0    | .1    | .4    | 5.3   | 12.0  | 10.0  | 4.5    | 1546         | 32.3        |
| 55/59  | .0   | .0    | .0    | .0    | *     | *     | *     | .2     | 13           | .3          |
| TOTAL  | 0    | 0     | 17    | 147   | 722   | 1644  | 1622  | 641    | 4793         | 100.0       |
| PCT    | .0   | .0    | .4    | 3.1   | 15.1  | 34.3  | 33.8  | 13.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|      | N    | NE  | E   | SE  | S   | SW  | W   | NW | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|-----|----|-----|------|
| .1   | *    | *   | .0  | *   | .0  | .1  | *   | .1 | .0  | .1   |
| 2.1  | 2.2  | .5  | .2  | .4  | 1.2 | .9  | 1.0 | .0 | .7  |      |
| 11.6 | 20.8 | 4.1 | 1.2 | 1.9 | 4.7 | 5.3 | 5.8 | .0 | 2.6 |      |
| 5.2  | 19.1 | 3.1 | .4  | .7  | .9  | .7  | 1.4 | .0 | .8  |      |
| *    | .1   | *   | .0  | *   | .0  | .0  | *   | .0 | *   |      |
| 19.1 | 42.2 | 7.8 | 1.8 | 3.0 | 6.9 | 6.9 | 8.2 | .0 | 4.1 |      |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 81  | 70  | 68  | 64  | 61 | 57 | 50  | 64.5 | 2559         |
| 06009         | 78  | 70  | 68  | 64  | 60 | 57 | 49  | 64.2 | 3409         |
| 12015         | 82  | 75  | 72  | 67  | 62 | 59 | 52  | 67.2 | 2681         |
| 18021         | 82  | 75  | 72  | 66  | 62 | 60 | 50  | 66.3 | 3431         |
| TOT           | 82  | 74  | 71  | 65  | 61 | 58 | 49  | 65.5 | 12080        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.4   | 9.6   | 29.4  | 38.8  | 20.7   | 81   | 1210         |
| 06009         | .0   | 2.1   | 11.1  | 30.1  | 38.1  | 18.6   | 80   | 1212         |
| 12015         | .0   | 6.4   | 21.6  | 37.3  | 26.9  | 7.8    | 75   | 1275         |
| 18021         | .0   | 3.8   | 16.8  | 37.8  | 32.6  | 9.0    | 77   | 1289         |
| TOT           | 0    | 173   | 743   | 1683  | 1695  | 692    | 78   | 4986         |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | *        |          | 5     | *        | .1        |
| 11/13              | .0       | .0       | .0       | *        | .0       | .0       | .1       | *        |          | 19    | .0       | .3        |
| 9/10               | .0       | .0       | .0       | *        | .0       | .2       | *        |          | .0       | 33    | *        | .5        |
| 7/8                | .0       | .0       | .0       | .1       | .1       | .7       | .5       | .1       | .0       | 85    | .1       | 1.3       |
| 6                  | .0       | .0       | .0       | *        | .3       | .5       | .2       | .0       | .0       | 62    | *        | 1.0       |
| 5                  | .0       | .0       | *        | .1       | .8       | 1.0      | .3       | .0       | .0       | 132   | .1       | 2.0       |
| 4                  | .0       | .0       | .0       | .2       | 1.6      | 1.7      | .2       | *        | .0       | 227   | .1       | 3.6       |
| 3                  | .0       | .0       | .0       | .3       | 2.1      | 2.0      | .1       | .0       | .0       | 280   | .1       | 4.5       |
| 2                  | .0       | .0       | .0       | 1.2      | 5.0      | 2.3      | *        | .0       | .0       | 518   | .1       | 8.4       |
| 1                  | .0       | .0       | *        | 2.0      | 8.2      | 3.0      | *        | .0       | .0       | 809   | .2       | 13.1      |
| 0                  | .0       | .0       | .1       | 6.0      | 11.3     | 2.1      | *        | .0       | .0       | 1191  | .3       | 19.2      |
| -1                 | .0       | .0       | .2       | 6.5      | 9.6      | .9       | .0       | .0       | .0       | 1046  | .3       | 16.9      |
| -2                 | .0       | *        | .2       | 6.4      | 5.3      | .3       | *        | .0       | .0       | 750   | .1       | 12.1      |
| -3                 | .0       | .0       | .2       | 4.1      | 2.3      | .2       | .0       | .0       | .0       | 416   | .1       | 6.7       |
| -4                 | *        | .0       | .3       | 2.7      | .8       | *        | .0       | .0       | .0       | 230   | .1       | 3.7       |
| -5                 | .0       | .0       | .3       | 1.1      | .6       | *        | .0       | .0       | .0       | 128   | *        | 2.0       |
| -6                 | .0       | *        | .2       | .3       | .1       | .0       | .0       | .0       | .0       | 41    | .0       | .7        |
| -7/-8              | .0       | *        | .3       | .3       | .2       | .0       | .0       | .0       | .0       | 53    | *        | .8        |
| -9/-10             | .0       | .1       | .3       | .2       | *        | .0       | .0       | .0       | .0       | 37    | .0       | .6        |
| -11/-13            | .1       | .3       | .1       | *        | *        | .0       | .0       | .0       | .0       | 31    | .0       | .5        |
| -14/-16            | .1       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 13    | .0       | .2        |
| -17/-19            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 17       | 34       | 197      | 2938     | 916      | 115      | 19       | 4        |          | 6107  | 100      | 6007      |
| PCT                | .3       | .6       | 2.2      | 31.6     | 48.1     | 15.0     | 1.9      | .3       | .1       | 100.0 | 1.6      | 98.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      | NE  |      |       |       |       |     |      |  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |
| <1      | .7  | 2.3  | *     | .0    | .0    | .0  | 3.0  | .5  | 1.4  | *     | .0    | .0    | .0  | 1.9  |  |
| 1-2     | .6  | 5.1  | 1.7   | .0    | .0    | .0  | 7.3  | .7  | 7.9  | 3.1   | .0    | .0    | .0  | 11.7 |  |
| 3-4     | .1  | 2.4  | 2.9   | .2    | .0    | .0  | 5.6  | .1  | 2.7  | 6.9   | .2    | .0    | .0  | 9.9  |  |
| 5-6     | .0  | .4   | 1.9   | .1    | .0    | .0  | 2.5  | .0  | .6   | 5.3   | .6    | .0    | .0  | 6.4  |  |
| 7       | .0  | .1   | .9    | .4    | *     | .0  | 1.4  | .0  | .1   | 3.2   | 1.2   | .1    | .0  | 4.6  |  |
| 8-9     | .0  | .0   | .1    | .2    | *     | .0  | .3   | .0  | .0   | 1.1   | .7    | .1    | .0  | 2.0  |  |
| 10-11   | .0  | *    | .1    | .4    | .0    | .0  | .5   | .0  | *    | .2    | .8    | *     | .0  | 1.0  |  |
| 12      | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | .1    | .2    | *     | .0  | .3   |  |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .2    | .1    | .2    | .0  | .5   |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |  |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | *     | .0    | .0  | *    |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |
| TOT PCT | 1.3 | 10.3 | 7.7   | 1.4   | .1    | .0  | 20.8 | 1.3 | 12.7 | 20.2  | 3.9   | .4    | .0  | 38.3 |  |

| E       |     |      |       |       |       |     |     | SE  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .2  | .5   | .1    | .0    | .0    | .0  | .8  | .1  | .3   | *     | .0    | .0    | .0  | .4  |  |
| 1-2     | .2  | 2.3  | .4    | .0    | .0    | .0  | 2.9 | .1  | .7   | .1    | .0    | .0    | .0  | .8  |  |
| 3-4     | *   | .7   | 1.0   | .0    | .0    | .0  | 1.7 | *   | .1   | .2    | .0    | .0    | .0  | .4  |  |
| 5-6     | .0  | .1   | .3    | *     | .0    | .0  | .5  | .0  | *    | .1    | .0    | .0    | .0  | .1  |  |
| 7       | .0  | .0   | .2    | *     | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | *   |  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .4  | 3.6  | 2.1   | .1    | .0    | .0  | 6.2 | .2  | 1.2  | .4    | .0    | .0    | .0  | 1.8 |  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)AREA 0005, CENTRAL SPANISH SAHARA  
24.7N 16.3W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .2  | .6   | .0    | .0    | .0    | .0  |  | .8  | .3  | 1.1  | .1    | .0    | .0    | .0  |  | 1.4 |
| 1-2     | .2  | 1.0  | .2    | .0    | .0    | .0  |  | 1.4 | .3  | 1.9  | .4    | .0    | .0    | .0  |  | 2.7 |
| 3-4     | .0  | .4   | .3    | .0    | .0    | .0  |  | .6  | .0  | .8   | .5    | .0    | .0    | .0  |  | 1.4 |
| 5-6     | .0  | .4   | .1    | .0    | .0    | .0  |  | .1  | .0  | .1   | .7    | .0    | .0    | .0  |  | .8  |
| 7       | .0  | .1   | .0    | .0    | .0    | .0  |  | .2  | .0  | .1   | .2    | .1    | .0    | .0  |  | .3  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .1    | .0    | .0  |  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .1    | .0    | .0  |  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .3  | 2.1  | .6    | .1    | .0    | .0  |  | 3.2 | .7  | 4.0  | 1.9   | .3    | .0    | .0  |  | 6.9 |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .6  | .5   | .1    | .0    | .0    | .0  |  | 1.2 | .6  | 1.2  | .1    | .0    | .0    | .0  |  | 1.9 |           |
| 1-2     | .4  | 2.6  | .4    | .0    | .0    | .0  |  | 3.4 | .4  | 3.2  | .4    | .0    | .0    | .0  |  | 4.0 |           |
| 3-4     | .0  | .7   | .4    | .0    | .0    | .0  |  | 1.1 | .0  | .9   | .6    | .0    | .0    | .0  |  | 1.6 |           |
| 5-6     | .0  | .1   | .3    | .0    | .0    | .0  |  | .4  | .0  | .1   | .3    | .1    | .0    | .0  |  | .5  |           |
| 7       | .0  | .1   | .1    | .0    | .0    | .0  |  | .2  | .0  | .0   | .1    | .0    | .0    | .0  |  | .2  |           |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | 1.1 | 4.1  | 1.3   | .0    | .0    | .0  |  | 6.4 | 1.0 | 5.5  | 1.6   | .1    | .0    | .0  |  | 8.2 | 91.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 12.1 | 8.0  | .4    | .0    | .0    | .0  | 20.4  |         |
| 1-2     | 3.1  | 24.6 | 6.5   | .0    | .0    | .0  | 34.1  |         |
| 3-4     | .3   | 8.7  | 12.6  | .4    | .0    | .0  | 22.0  |         |
| 5-6     | .0   | 1.4  | 8.8   | .9    | .0    | .0  | 11.1  |         |
| 7       | .0   | .5   | 4.6   | 1.7   | .1    | .0  | 6.9   |         |
| 8-9     | .0   | .1   | 1.5   | 1.0   | .1    | .0  | 2.7   |         |
| 10-11   | .0   | .0   | .4    | 1.2   | .0    | .0  | 1.7   |         |
| 12      | .0   | .0   | .1    | .3    | .0    | .0  | .4    |         |
| 13-16   | .0   | .0   | .3    | .2    | .2    | .0  | .7    |         |
| 17-19   | .0   | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 15.5 | 43.2 | 35.1  | 5.8   | .4    | .0  | 100.0 | 3507    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.8 | 8.0  | 9.8  | 4.2  | 2.2  | .9  | .5    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1195  | 3        |
| 6-7          | .0  | 1.3  | 4.9  | 5.7  | 3.4  | 1.5 | .8    | .5  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 799   | 5        |
| 8-9          | .0  | .5   | 2.7  | 3.2  | 3.1  | 1.4 | .8    | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 535   | 6        |
| 10-11        | .0  | 1.4  | 1.0  | 1.5  | 1.1  | .8  | .9    | .3  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 317   | 6        |
| 12-13        | .0  | .0   | 1.4  | .8   | .7   | .3  | .7    | .3  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 201   | 7        |
| >13          | .0  | .0   | .0   | .3   | .4   | .4  | .2    | .1  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 75    | 9        |
| INDET        | 6.4 | 5.4  | 5.8  | 3.8  | 2.9  | 1.8 | .8    | .5  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1204  | 4        |
| TOTAL        | 356 | 718  | 1113 | 837  | 592  | 310 | 200   | 97  | 91    | 10    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4326  | 5        |
| PCT          | 8.2 | 16.6 | 25.7 | 19.3 | 13.7 | 7.2 | 4.6   | 2.2 | 2.1   | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WO PCPN | FOG WO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .1   | .4        | .1   | .0        | .0   | .0              | .0   | .6              | .4             | .4                      | 1.4         | .0                  | 1.2        | .2                   | 96.0       |
| NE                 | .1   | .1        | .1   | .0        | .0   | .0              | .0   | .3              | .1             | .3                      | 1.6         | .0                  | 1.7        | .4                   | 95.7       |
| E                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 1.1                     | 2.2         | .0                  | 2.6        | 1.1                  | 92.9       |
| SE                 | 1.9  | .0        | .0   | .0        | .0   | .0              | .0   | 1.9             | 1.9            | 1.9                     | 2.8         | .0                  | .0         | .0                   | 91.5       |
| S                  | .9   | .0        | .9   | .0        | .0   | .0              | .0   | 1.8             | .0             | .0                      | 1.3         | .0                  | .0         | .0                   | 96.9       |
| SW                 | .2   | 1.5       | .0   | .0        | .0   | .0              | .0   | 1.7             | 1.5            | .0                      | .8          | .0                  | .0         | .0                   | 96.1       |
| W                  | .4   | .7        | .0   | .0        | .0   | .0              | .0   | 1.1             | 1.4            | .0                      | 1.0         | .0                  | .2         | .4                   | 95.9       |
| NW                 | .0   | .4        | .2   | .0        | .0   | .0              | .0   | .6              | .6             | .0                      | 1.5         | .0                  | .8         | .1                   | 96.4       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 9.7         | .0                  | 4.5        | .6                   | 85.1       |
| TOT PCT            | .1   | .3        | .1   | .0        | .0   | .0              | .0   | .5              | .4             | .3                      | 1.7         | .0                  | 1.4        | .3                   | 95.5       |
| TOT OBS:           | 7107 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG WO<br>PCPN | FOG WO<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 0000Z         | .2                 |              | .1   | .0           | .0   | .0                    | .0   | .3                      | .2                | .6           | 1.0            | .0                        | 1.0           | .3                                    | 96.5             |
| 0600Z         | .1                 | .6           | .0   | .0           | .0   | .0                    | .0   | .7                      | .5                | .3           | 1.9            | .0                        | .9            | .3                                    | 95.4             |
| 1200Z         | .0                 | .3           | .2   | .0           | .0   | .0                    | .0   | .4                      | .4                | .0           | 1.6            | .0                        | 1.8           | .4                                    | 95.4             |
| 1800Z         | .2                 | .3           | .1   | .0           | .0   | .0                    | .0   | .5                      | .4                | .2           | 2.3            | .0                        | 1.9           | .4                                    | 94.4             |
| TOT PCT       | .1                 | .3           | .1   | .0           | .0   | .0                    | .0   | .5                      | .4                | .3           | 1.7            | .0                        | 1.4           | .3                                    | 95.4             |
| TOT OBS:      | 7310               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    | 00    |       |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.2                | 10.3 | 9.7   | 1.5   | *     | .0 |       | 22.7  | 11.6      | 26.9     | 23.0     | 23.0       | 18.1  | 18.7  | 17.3  | 24.6  | 23.4  |    |
| NE       | .9                 | 15.3 | 27.0  | 7.1   | .2    | .0 |       | 50.5  | 14.4      | 48.0     | 57.4     | 50.2       | 52.7  | 53.1  | 58.3  | 49.1  | 49.8  |    |
| E        | .3                 | 2.8  | 2.5   | .6    | *     | .0 |       | 6.2   | 11.9      | 4.9      | 4.6      | 6.2        | 8.8   | 7.8   | 3.9   | 4.9   | 5.6   |    |
| SE       | .1                 | .6   | .1    | *     | .0    | .0 |       | .9    | 7.7       | .7       | .7       | 1.1        | 1.0   | 1.1   | .0    | .7    | .8    |    |
| S        | .2                 | .7   | .4    | *     | .0    | .0 |       | 1.2   | 8.4       | 1.1      | 2.3      | 1.3        | 1.3   | 1.5   | 1.3   | 1.2   | .8    |    |
| SW       | .4                 | 1.9  | .8    | .1    | *     | .0 |       | 3.2   | 8.8       | 2.6      | 1.8      | 3.0        | 3.8   | 3.7   | 3.6   | 3.5   | 2.5   |    |
| W        | .5                 | 3.7  | 1.4   | .2    | *     | .0 |       | 5.7   | 9.1       | 5.4      | 3.8      | 5.2        | 5.3   | 5.6   | 6.2   | 6.6   | 6.5   |    |
| NW       | .7                 | 4.7  | 2.0   | .2    | *     | .0 |       | 7.5   | 9.0       | 7.9      | 6.5      | 7.6        | 7.5   | 6.5   | 8.0   | 7.6   | 8.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 2.0                |      |       |       |       |    |       | 2.0   | .0        | 2.5      | .0       | 2.5        | 1.3   | 2.0   | 1.3   | 1.8   | 1.8   |    |
| TOT OBS  | 847                | 5444 | 5964  | 1317  | 44    | 0  | 13616 |       | 12.3      | 2671     | 153      | 2645       | 1208  | 2861  | 153   | 2703  | 1222  |    |
| TOT PCT  | 6.2                | 40.0 | 43.8  | 9.7   | .3    | .0 |       | 100.0 |           | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 5.3                | 12.4 | 4.7   | .3    | .0  |           | 22.7     | 11.6     | 26.7       | 21.5  | 18.7  | 24.2  |
| NE       | 5.4                | 25.9 | 17.4  | 1.8   | *   |           | 50.5     | 14.4     | 48.5       | 51.0  | 53.4  | 49.3  |
| E        | 1.3                | 3.3  | 1.4   | .1    | .0  |           | 6.2      | 11.9     | 4.9        | 7.0   | 7.6   | 5.1   |
| SE       | .4                 | .4   | *     | .0    | .0  |           | .9       | 7.7      | .7         | 1.1   | 1.0   | .7    |
| S        | .6                 | .6   | .1    | *     | .0  |           | 1.2      | 8.4      | 1.2        | 1.3   | 1.5   | 1.1   |
| SW       | 1.3                | 1.6  | .3    | .0    | .0  |           | 3.2      | 8.8      | 2.6        | 3.3   | 3.7   | 3.2   |
| W        | 2.3                | 2.8  | .5    | .1    | *   |           | 5.7      | 9.1      | 5.4        | 5.2   | 5.6   | 6.6   |
| NW       | 2.8                | 4.1  | .6    | *     | .0  |           | 7.5      | 9.0      | 7.8        | 7.5   | 6.6   | 8.0   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |     |           | 2.0      | .0       | 2.3        | 2.2   | 2.0   | 1.8   |
| TOT OBS  | 2929               | 6959 | 3416  | 310   | 2   | 13616     |          | 12.3     | 2824       | 3853  | 3014  | 3925  |
| TOT PCT  | 21.5               | 51.1 | 25.1  | 2.3   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1895-1973

MARCH

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 2.3  | 3.0 | 39.1 | 44.7               | 9.8   | .5    | .0  | 12.4  | 100.0    | 2824      |
| 06009 | 2.2  | 4.3 | 40.7 | 42.0               | 10.3  | .4    | .0  | 12.2  | 100.0    | 3853      |
| 12015 | 2.0  | 4.3 | 39.9 | 43.5               | 10.1  | .2    | .0  | 12.4  | 100.0    | 3014      |
| 18021 | 1.8  | 4.4 | 39.9 | 45.1               | 8.6   | .2    | .0  | 12.1  | 100.0    | 3925      |
| TOT   | 279  | 588 | 5444 | 5984               | 1317  | 44    | 0   | 12.3  |          | 13616     |
| PCT   | 2.0  | 4.2 | 40.0 | 43.8               | 9.7   | .3    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-------|-----------|------------------|
| N        | 16.1 | 4.3  | 3.9  | 1.2   |           | 2.2              |
| NE       | 27.0 | 9.7  | 10.1 | 2.8   |           | 2.6              |
| E        | 2.4  | .7   | .9   | .2    |           | 2.6              |
| SE       | .3   | .1   | .2   | .1    |           | 3.2              |
| S        | .9   | .3   | .2   | .1    |           | 2.4              |
| SW       | 1.7  | .7   | .6   | .1    |           | 2.8              |
| W        | 3.3  | 1.2  | 1.2  | .2    |           | 2.6              |
| NW       | 4.1  | 1.5  | 1.4  | .4    |           | 2.7              |
| VAR      | .0   | .0   | .0   | .0    |           | .0               |
| CALM     | 1.4  | .3   | .4   | .1    |           | 2.2              |
| TOT OBS  | 3360 | 1106 | 1111 | 296   | 5873      | 2.5              |
| TOT PCT  | 57.2 | 18.8 | 18.9 | 5.0   | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .0  | .0  | .1  | .4  | 1.1  | .9   | .5   | .1   | .1   | .2    | 22.2    |       |
| NE      | .0  | .1  | .9  | 3.1 | 2.6  | 1.2  | .4   | .3   | .4   | 40.5  |         |       |
| E       | .0  | .0  | .0  | .1  | .2   | .2   | .1   | .0   | *    | *     | 3.5     |       |
| SE      | .0  | .0  | *   | .0  | *    | .1   | *    | .0   | *    | *     | .5      |       |
| S       | .0  | .0  | *   | *   | .1   | .1   | *    | .0   | .0   | *     | 1.3     |       |
| SW      | .0  | .0  | *   | .2  | .2   | .1   | .1   | .0   | *    | *     | 2.6     |       |
| W       | .0  | .0  | .0  | .1  | .3   | .4   | .1   | *    | *    | *     | 4.9     |       |
| NW      | .0  | .0  | .0  | .1  | .4   | .2   | .1   | *    | *    | .1    | 6.2     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .0  | .0  | .0  | .0  | .2   | .1   | .1   | *    | *    | *     | 1.8     |       |
| TOT OBS | 5   | 0   | 13  | 97  | 333  | 281  | 128  | 36   | 26   | 54    | 4900    | 5873  |
| TOT PCT | .1  | .0  | .2  | 1.7 | 5.7  | 4.8  | 2.2  | .6   | .4   | .9    | 83.4    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING (FEET) | VSBY (NH) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500     | 1.2       | 1.4     | 1.4     | 1.4     | 1.4       | 1.4       | 1.4        | 1.4     |
| = OR >5000     | 1.8       | 2.0     | 2.0     | 2.0     | 2.0       | 2.0       | 2.0        | 2.0     |
| = OR >3500     | 3.7       | 4.1     | 4.2     | 4.2     | 4.2       | 4.2       | 4.2        | 4.2     |
| = OR >2000     | 7.7       | 8.8     | 9.0     | 9.0     | 9.0       | 9.0       | 9.0        | 9.0     |
| = OR >1000     | 12.5      | 14.3    | 14.6    | 14.6    | 14.6      | 14.6      | 14.6       | 14.6    |
| = OR >600      | 13.9      | 15.9    | 16.2    | 16.2    | 16.2      | 16.3      | 16.3       | 16.3    |
| = OR >300      | 14.1      | 16.1    | 16.4    | 16.4    | 16.4      | 16.5      | 16.5       | 16.5    |
| = OR >150      | 14.1      | 16.1    | 16.4    | 16.4    | 16.4      | 16.5      | 16.5       | 16.5    |
| = OR >0        | 14.1      | 16.1    | 16.4    | 16.5    | 16.5      | 16.5      | 16.5       | 16.6    |
| TOTAL          | 843       | 965     | 983     | 987     | 987       | 991       | 991        | 993     |

TOTAL NUMBER OF OBS: 5994

PCT FREQ NH <5/8: 83.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----------|
| 36.3 | 16.4 | 13.8 | 9.6 | 6.7 | 4.0 | 4.6 | 4.6 | 3.9 | .1  | 6303      |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VISBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|---------------|--------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2          | PCP    | .0   | .0   | .0  | .0 | .0  | *   | .0  | .0  | .0  | .0   | *     | .2           |
|               | NO PCP | *    | *    | .0  | *  | *   | *   | *   | *   | .0  | *    | *     |              |
|               | TOT %  | *    | *    | .0  | *  | *   | *   | *   | *   | .0  | *    | *     |              |
| 1/2<1         | PCP    | *    | *    | .0  | .0 | .0  | *   | *   | .0  | .0  | .0   | *     | .6           |
|               | NO PCP | .1   | .3   | *   | .0 | .0  | *   | *   | *   | .0  | *    | *     |              |
|               | TOT %  | .1   | .4   | *   | .0 | .0  | *   | *   | *   | .0  | *    | *     |              |
| 1<2           | PCP    | .0   | .0   | .0  | .0 | .0  | *   | .0  | .0  | .0  | .0   | *     | .3           |
|               | NO PCP | .1   | .2   | *   | .0 | .0  | .0  | .0  | *   | .0  | .0   | *     |              |
|               | TOT %  | .1   | .2   | *   | .0 | .0  | *   | .0  | *   | .0  | .0   | *     |              |
| 2<5           | PCP    | .0   | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | *     | 1.5          |
|               | NO PCP | .3   | .7   | .1  | *  | *   | .0  | .1  | .1  | .0  | .2   | *     |              |
|               | TOT %  | .3   | .7   | .1  | *  | *   | .0  | .1  | .1  | .0  | .2   | *     |              |
| 5<10          | PCP    | .1   | *    | .0  | *  | *   | .0  | *   | *   | .0  | .0   | .2    | 15.7         |
|               | NO PCP | 3.8  | 7.8  | 1.0 | .1 | .3  | .6  | .7  | 1.0 | .0  | .4   | *     |              |
|               | TOT %  | 3.8  | 7.8  | 1.0 | .2 | .3  | .6  | .7  | 1.0 | .0  | .4   | *     |              |
| 10+           | PCP    | .1   | *    | .0  | .0 | .0  | *   | *   | *   | .0  | .0   | .2    | 81.6         |
|               | NO PCP | 20.8 | 40.0 | 3.2 | .5 | 1.2 | 2.6 | 5.0 | 6.3 | .0  | 1.6  | *     |              |
|               | TOT %  | 20.8 | 40.1 | 3.2 | .5 | 1.2 | 2.7 | 5.1 | 6.3 | .0  | 1.6  | *     |              |
| TOT OBS       |        |      |      |     |    |     |     |     |     |     |      |       |              |
| TOT PCT       |        | 25.1 | 49.2 | 4.4 | .7 | 1.6 | 3.4 | 5.9 | 7.5 | .0  | 2.2  | 100.0 | 7091         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |       |
|--------------|------------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|-------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     | .1           |       |
|              | 4-10       | *    | *    | .0  | *  | *   | *   | *   | *   | .0  | *    | *     |              |       |
|              | 11-21      | *    | *    | *   | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |       |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |       |
|              | TOT %      | *    | *    | *   | *  | *   | *   | *   | *   | .0  | *    | .1    |              |       |
| 1/2<1        | 0-3        | *    | *    | .0  | .0 | .0  | *   | *   | *   | .0  | *    | *     | .1           |       |
|              | 4-10       | *    | .1   | *   | .0 | .0  | *   | *   | *   | .0  | *    | .2    |              |       |
|              | 11-21      | *    | .1   | *   | .0 | .0  | *   | *   | .0  | .0  | *    | .1    |              |       |
|              | 22+        | *    | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |       |
|              | TOT %      | .1   | .3   | *   | .0 | .0  | *   | *   | *   | .0  | *    | .5    |              |       |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     | .1           |       |
|              | 4-10       | *    | *    | .0  | .0 | *   | *   | *   | *   | .0  | *    | .1    |              |       |
|              | 11-21      | *    | .1   | *   | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |       |
|              | 22+        | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |       |
|              | TOT %      | .1   | .2   | *   | .0 | *   | *   | *   | *   | .0  | *    | .3    |              |       |
| 2<5          | 0-3        | *    | *    | *   | .0 | .0  | *   | *   | *   | .0  | .2   | .3    | .6           |       |
|              | 4-10       | .1   | .2   | .1  | *  | .0  | *   | *   | *   | .0  | *    | .6    |              |       |
|              | 11-21      | .1   | .3   | *   | *  | *   | .0  | *   | *   | .0  | *    | .6    |              |       |
|              | 22+        | *    | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |       |
|              | TOT %      | .3   | .7   | .1  | .1 | *   | *   | .1  | .1  | .0  | .2   | 1.6   |              |       |
| 5<10         | 0-3        | .1   | .1   | *   | *  | .1  | *   | .1  | .1  | .0  | .4   | .9    | 5.1          |       |
|              | 4-10       | 1.3  | 1.9  | .5  | .1 | .1  | .3  | .4  | .4  | .0  | *    | *     |              |       |
|              | 11-21      | 1.7  | 4.4  | .4  | *  | .1  | .2  | .2  | .3  | .0  | *    | 7.3   |              |       |
|              | 22+        | .3   | 1.2  | .1  | .0 | .0  | .0  | *   | *   | .0  | *    | 1.7   |              |       |
|              | TOT %      | 3.4  | 7.6  | 1.0 | .2 | .3  | .5  | .7  | .9  | .0  | .4   | 15.0  |              |       |
| 10+          | 0-3        | 1.0  | .8   | .2  | .1 | .1  | .3  | .3  | .4  | .0  | 1.6  | 4.8   | 34.1         |       |
|              | 4-10       | 9.3  | 19.0 | 1.9 | .3 | .6  | 1.6 | 3.2 | 4.2 | .0  | *    | *     |              |       |
|              | 11-21      | 8.5  | 22.4 | 1.5 | .1 | .3  | .6  | 1.2 | 1.6 | .0  | *    | 36.2  |              |       |
|              | 22+        | 1.2  | 5.6  | .3  | .0 | .0  | .1  | .1  | .1  | .0  | *    | 7.4   |              |       |
|              | TOT %      | 20.0 | 41.9 | 3.9 | .5 | .9  | 2.5 | 4.9 | 6.3 | .0  | 1.6  | 82.6  |              |       |
| TOT OBS      |            |      |      |     |    |     |     |     |     |     |      |       |              | 10025 |
| TOT PCT      |            |      |      |     |    |     |     |     |     |     |      |       |              |       |
|              |            | 24.0 | 50.7 | 5.1 | .8 | 1.2 | 3.1 | 5.6 | 7.3 | .0  | 2.1  | 100.0 |              |       |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .1         | .0         | .1         | 1.3        | 4.8          | 4.0          | 1.9          | .4           | .5           | .7    | 13.8  | 86.2                | 1497         |
| 06009         | .0         | .0         | .2         | 2.0        | 8.2          | 5.9          | 3.1          | .9           | .3           | 1.2   | 21.9  | 78.1                | 1467         |
| 12015         | .1         | .0         | .3         | 2.1        | 5.5          | 5.5          | 2.1          | .6           | .5           | 1.1   | 17.8  | 82.2                | 1683         |
| 18021         | .1         | .0         | .3         | .9         | 3.5          | 3.3          | 1.3          | .4           | .3           | .7    | 10.8  | 89.2                | 1568         |
| TOT           | 5          | 0          | 13         | 99         | 340          | 290          | 130          | 36           | 26           | 57    | 996   | 5219                | 6215         |
| PCT           | .1         | .0         | .2         | 1.6        | 5.5          | 4.7          | 2.1          | .6           | .4           | .9    | 16.0  | 84.0                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | *    | .3    | .3  | 1.3 | 14.4 | 83.6 | 2289         |
| 06009         | .1   | .7    | .2  | 1.7 | 17.7 | 79.6 | 2714         |
| 12015         | .2   | .3    | .4  | 1.9 | 12.4 | 84.9 | 2438         |
| 18021         | .2   | .6    | .5  | 1.5 | 15.4 | 81.8 | 2786         |
| TOT           | 13   | 51    | 36  | 163 | 1540 | 8424 | 10227        |
| PCT           | .1   | .5    | .4  | 1.6 | 15.1 | 82.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .1            | .3         | 3.1         | 12.5            | 84.4               | 1435         |
| 06009         | .0            | .4         | 4.6         | 20.0            | 75.5               | 1403         |
| 12015         | .1            | .5         | 4.9         | 15.5            | 79.5               | 1628         |
| 18021         | .1            | .5         | 2.6         | 9.5             | 87.9               | 1528         |
| TOT           | 5             | 26         | 228         | 858             | 4908               | 5994         |
| PCT           | .1            | .4         | 3.8         | 14.3            | 81.9               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .0     | 1            | *           |
| 75/79  | .0   | *     | *     | .1    | .3    | .3    | .1    | .0     | 43           | .8          |
| 70/74  | .0   | .0    | .1    | .4    | 2.5   | 4.0   | 3.3   | .9     | 610          | 11.2        |
| 65/69  | .0   | .0    | .1    | 1.2   | 8.9   | 20.1  | 20.1  | 8.4    | 3192         | 58.7        |
| 60/64  | .0   | .0    | *     | .5    | 3.5   | 9.9   | 10.8  | 4.4    | 1586         | 29.2        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | .1     | 7            | .1          |
| TOTAL  | 0    | 1     | 12    | 119   | 830   | 1863  | 1865  | 749    | 5439         | 100.0       |
| PCT    | .0   | *     | .2    | 2.2   | 15.3  | 34.3  | 34.3  | 13.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|-----|-----|-----|-----|-----|------|
| .0   | .0   | .0  | .0 | .0  | .0  | *   | .0  | .0  | .0   |
| .2   | .2   | *   | .0 | .0  | .1  | *   | .1  | .0  | .1   |
| 3.1  | 4.6  | .5  | .1 | .2  | .6  | .9  | 1.0 | .0  | .1   |
| 15.8 | 27.5 | 2.6 | .4 | 1.2 | 1.8 | 3.9 | 4.6 | .0  | .8   |
| 7.0  | 17.6 | 1.3 | .2 | .1  | .3  | .8  | 1.4 | .0  | .5   |
| .1   | .1   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    |
| 26.1 | 50.0 | 4.5 | .7 | 1.5 | 2.8 | 5.7 | 7.2 | .0  | 1.5  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 77  | 71  | 69  | 65  | 61 | 60 | 57  | 64.9 | 2871         |
| 06009         | 81  | 71  | 69  | 64  | 61 | 59 | 54  | 64.6 | 3866         |
| 12015         | 84  | 77  | 73  | 68  | 63 | 61 | 52  | 67.8 | 2967         |
| 18021         | 33  | 76  | 73  | 67  | 63 | 61 | 50  | 67.0 | 3858         |
| TOT           | 84  | 75  | 72  | 66  | 62 | 60 | 50  | 66.1 | 13562        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.2   | 9.0   | 31.6  | 38.4  | 19.8   | 81   | 1382         |
| 06009         | .0   | 1.7   | 10.4  | 29.6  | 40.1  | 18.3   | 81   | 1370         |
| 12015         | .0   | 4.6   | 22.1  | 37.6  | 27.8  | 7.9    | 76   | 1418         |
| 18021         | .0   | 2.3   | 19.1  | 37.4  | 31.4  | 9.7    | 77   | 1407         |
| TOT           | 0    | 138   | 849   | 1901  | 1915  | 774    | 79   | 5577         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 54<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FUG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .0        |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .0        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .3       | .1       | .0       | 27    | .0       | .4        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .1       | .3       | .1       | .0       | 32    | .0       | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .5       | .6       | .2       | .0       | 88    | .1       | 1.3       |
| 6                  | .0       | .0       | .0       | .0       | .1       | .5       | .3       | .0       | .0       | 63    | .0       | .9        |
| 5                  | .0       | .0       | .0       | .1       | .7       | 1.5      | .6       | .0       | .0       | 186   | .1       | 2.7       |
| 4                  | .0       | .0       | .0       | .3       | 1.3      | 1.7      | .3       | .0       | .0       | 244   | .1       | 3.6       |
| 3                  | .0       | .0       | .0       | .2       | 2.2      | 2.4      | .3       | .0       | .0       | 336   | .1       | 5.0       |
| 2                  | .0       | .0       | .0       | 1.0      | 4.9      | 3.1      | .3       | .0       | .0       | 616   | .3       | 9.1       |
| 1                  | .0       | .0       | .0       | 2.4      | 7.7      | 2.9      | .0       | .0       | .0       | 865   | .2       | 12.9      |
| 0                  | .0       | .0       | .1       | 5.7      | 10.9     | 2.4      | .1       | .0       | .0       | 1269  | .2       | 19.0      |
| -1                 | .0       | .0       | .1       | 6.2      | 9.5      | 1.0      | .1       | .0       | .0       | 1119  | .3       | 16.7      |
| -2                 | .0       | .0       | .1       | 5.1      | 5.7      | .6       | .0       | .0       | .0       | 767   | .1       | 11.5      |
| -3                 | .0       | .0       | .2       | 3.4      | 2.9      | .3       | .0       | .0       | .0       | 445   | .1       | 6.7       |
| -4                 | .0       | .0       | .2       | 2.0      | 1.1      | .1       | .0       | .0       | .0       | 224   | .0       | 3.4       |
| -5                 | .0       | .0       | .3       | 1.2      | .9       | .1       | .0       | .0       | .0       | 158   | .0       | 2.4       |
| -6                 | .0       | .0       | .1       | .4       | .2       | .0       | .0       | .0       | .0       | 47    | .0       | .7        |
| -7/-8              | .0       | .1       | .1       | .3       | .2       | .0       | .0       | .0       | .0       | 48    | .0       | .7        |
| -9/-10             | .0       | .1       | .1       | .2       | .1       | .0       | .0       | .0       | .0       | 28    | .0       | .4        |
| -11/-13            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 10    | .0       | .1        |
| -14/-16            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 5     | .0       | .1        |
| TOTAL              | 2        | 13       | 83       | 1892     | 1142     | 214      | 30       | 3        | 3        | 6584  | 1.8      | 6466      |
| PCT                | .02      | 1.3      | 28.7     | 48.7     | 17.3     | 3.3      | .5       | .0       | .0       | 100.0 | 1.8      | 98.2      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | 1.3  | .2    | .0    | .0    | .0  | 1.7  | .3  | 1.8  | .1    | .0    | .0    | .0  | 2.2  |
| 1-2     | .3  | 4.2  | 1.7   | .0    | .0    | .0  | 6.2  | .2  | 7.5  | 3.2   | .0    | .0    | .0  | 10.9 |
| 3-4     | .0  | 2.4  | 3.9   | .3    | .0    | .0  | 6.5  | .1  | 4.5  | 10.6  | .8    | .0    | .0  | 16.1 |
| 5-6     | .0  | .6   | 3.5   | .5    | .0    | .0  | 4.6  | .0  | 1.0  | 8.8   | 2.2   | .0    | .0  | 12.1 |
| 7       | .0  | .1   | 1.7   | .6    | .0    | .0  | 2.5  | .1  | .0   | 4.2   | 2.0   | .1    | .0  | 6.4  |
| 8-9     | .0  | .0   | .5    | .4    | .0    | .0  | .9   | .0  | .0   | 1.1   | 1.5   | .1    | .0  | 2.8  |
| 10-11   | .0  | .0   | .2    | .2    | .0    | .0  | .4   | .0  | .0   | .5    | .6    | .1    | .0  | 1.2  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | .4    | .0    | .0  | .4   |
| 13-16   | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .1    | .2    | .1    | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 8.6  | 11.8  | 2.0   | .1    | .0  | 23.0 | .6  | 14.9 | 28.7  | 7.7   | .3    | .0  | 52.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .3   | .1    | .0    | .0    | .0  | .4  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .0  | 1.3  | .2    | .0    | .0    | .0  | 1.6 | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .4   | .7    | .1    | .0    | .0  | 1.2 | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .1   | .4    | .0    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 2.1  | 1.6   | .2    | .0    | .0  | 4.0 | .1  | .3   | .2    | .0    | .0    | .0  | .5  |

PERIOD: (OVER-ALL) 1963-1973

MARCH  
TABLE 18 (CONT)AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | *   | .3   | *     | .0    | .0    | .0  | .3  | .2  | .6   | .0    | .0    | .0    | .0  | .8  |           |
| 1-2     | *   | .3   | .1    | .0    | .0    | .0  | .4  | .1  | .9   | .2    | .0    | .0    | .0  | 1.2 |           |
| 3-4     | .0  | .3   | .2    | .0    | .0    | .0  | .4  | .0  | .5   | .2    | .0    | .0    | .0  | .7  |           |
| 5-6     | .0  | *    | .3    | .0    | .0    | .0  | .3  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | *   | .9   | .6    | .0    | .0    | .0  | 1.5 | .3  | 2.0  | .5    | *     | .0    | .0  | 2.9 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .3  | .8   | .1    | .0    | .0    | .0  | 1.2 | .3  | 1.0  | .2    | .0    | .0    | .0  | 1.5 |           |
| 1-2     | .1  | 2.2  | .2    | .0    | .0    | .0  | 2.6 | *   | 2.3  | .4    | .0    | .0    | .0  | 2.8 |           |
| 3-4     | .0  | .7   | .5    | .0    | .0    | .0  | 1.3 | *   | .7   | .5    | .1    | .0    | .0  | 1.3 |           |
| 5-6     | .0  | .2   | .5    | *     | .0    | .0  | .8  | .0  | .1   | .6    | .0    | .0    | .0  | .6  |           |
| 7       | .0  | .0   | .2    | *     | .0    | .0  | .2  | .0  | *    | .2    | .1    | .0    | .0  | .3  |           |
| 8-9     | .0  | *    | .0    | .0    | .0    | .0  | .1  | .0  | .0   | *     | *     | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |           |
| 12      | .0  | *    | .0    | *     | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .4  | 4.0  | 1.6   | .1    | .0    | .0  | 6.1 | .4  | 4.2  | 1.9   | .2    | .0    | .0  | 6.6 | 97.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 5.1 | 6.3  | .7    | .0    | .0    | .0  | 12.0  |         |
| 1-2     | .9  | 18.9 | 5.9   | .0    | .0    | .0  | 25.7  |         |
| 3-4     | .2  | 7.5  | 16.5  | 1.2   | .0    | .0  | 27.4  |         |
| 5-6     | .0  | 2.0  | 14.1  | 2.7   | .0    | .0  | 18.9  |         |
| 7       | .1  | .2   | 6.3   | 2.7   | .1    | .0  | 9.4   |         |
| 8-9     | .0  | .1   | 1.7   | 2.0   | .1    | .0  | 3.9   |         |
| 10-11   | .0  | .1   | .7    | .8    | .1    | .0  | 1.6   |         |
| 12      | .0  | *    | .1    | .4    | .0    | .0  | .5    |         |
| 13-16   | .0  | *    | .2    | .2    | .1    | .0  | .5    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | *     | *     | .1    | .0  | .1    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 6.2 | 37.0 | 46.3  | 10.1  | .4    | .0  | 100.0 | 3834    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.4 | 8.3  | 10.4 | 6.0  | 2.8  | 1.0 | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1456  | 4        |
| 6-7          | .1  | .8   | 5.7  | 5.7  | 4.6  | 2.4 | 1.5   | .4  | .3    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1027  | 6        |
| 8-9          | .0  | .5   | 1.6  | 2.9  | 3.0  | 1.5 | 1.1   | .3  | .7    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 592   | 7        |
| 10-11        | .0  | .8   | .7   | 1.0  | 1.6  | 1.1 | 1.0   | .4  | .4    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 338   | 7        |
| 12-13        | .0  | .0   | 1.3  | .6   | .5   | .5  | .7    | .3  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 210   | 7        |
| >13          | .0  | .0   | .0   | .1   | .4   | .3  | .2    | .2  | .2    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 67    | 9        |
| INDET        | 3.8 | 3.9  | 5.1  | 4.0  | 3.1  | 1.6 | .7    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1076  | 4        |
| TOTAL        | 255 | 684  | 1181 | 971  | 787  | 402 | 263   | 88  | 103   | 14    | 8     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4756  | 5        |
| PCT          | 5.4 | 14.4 | 24.8 | 20.4 | 16.5 | 8.5 | 5.5   | 1.9 | 2.2   | .3    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | .1        | .1   | .0        | .0   | .0             | .0   | .3                      | .3             | .1        | 1.5         | *                   | 1.6        | .2              | 96.0       |
| NE       | .1                 | .2        | .1   | .0        | .0   | .0             | .0   | .3                      | .2             | .1        | 1.4         | .0                  | 1.8        | .1              | 96.0       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0             | .0   | .6                      | .4             | .6        | 3.9         | .0                  | .4         | .0              | 94.1       |
| SE       | 3.6                | 3.6       | .0   | .0        | .0   | .0             | .0   | 7.3                     | .0             | 3.6       | 1.8         | .0                  | .0         | .0              | 90.9       |
| S        | 1.8                | .0        | .0   | .0        | .0   | .0             | .0   | 1.8                     | .0             | 2.7       | 4.1         | .0                  | .0         | .0              | 93.2       |
| SW       | .0                 | 1.1       | .0   | .0        | .0   | .0             | .0   | 1.1                     | 1.1            | .5        | .3          | .0                  | .0         | .0              | 97.0       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0             | .0   | .0                      | .6             | .0        | .6          | .0                  | .3         | .0              | 98.4       |
| NW       | .0                 | .3        | .3   | .0        | .0   | .0             | .0   | .6                      | .0             | .3        | 1.1         | .0                  | 1.0        | .0              | 97.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0             | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0             | .0   | .0                      | .0             | .0        | 3.4         | .0                  | .0         | .0              | 96.6       |
| TOT PCT  | .1                 | .2        | .1   | .0        | .0   | .0             | .0   | .3                      | .2             | .2        | 1.5         | *                   | 1.6        | .1              | 96.0       |
| TOT OBS: | 6660               |           |      |           |      |                |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .1                 | .4        | .2   | .0        | .0   | .0             | .0   | .7                      | .3             | .2        | 1.3         | .0                  | 1.2        | .1              | 96.1       |
| 06009      | .1                 | .1        | .0   | .0        | .0   | .0             | .0   | .2                      | .3             | .4        | 1.2         | .0                  | 1.1        | .1              | 96.7       |
| 12015      | .1                 | .1        | .2   | .0        | .0   | .0             | .0   | .3                      | .2             | .1        | 1.6         | .0                  | 1.7        | .1              | 96.0       |
| 18021      | .0                 | .1        | .1   | .0        | .0   | .0             | .0   | .2                      | .1             | .0        | 1.8         | .1                  | 2.2        | .2              | 95.5       |
| TOT PCT    | .1                 | .2        | .1   | .0        | .0   | .0             | .0   | .4                      | .2             | .2        | 1.5         | *                   | 1.6        | .1              | 96.1       |
| TOT OBS:   | 6828               |           |      |           |      |                |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 11.3 | 12.8  | 2.0   | *     | .0  |       | 27.3      | 12.1     |          | 30.1       | 33.6  | 27.4  | 22.5  | 23.5  | 20.6  | 30.8  | 26.6  |
| NE       | .8                 | 13.8 | 32.0  | 7.5   | .2    | .0  |       | 54.2      | 14.8     |          | 52.4       | 58.0  | 54.0  | 55.1  | 57.8  | 66.8  | 51.8  | 52.7  |
| E        | .3                 | 1.9  | 2.1   | .3    | .0    | .0  |       | 4.5       | 11.8     |          | 3.1        | 1.5   | 4.8   | 8.1   | 5.5   | 2.1   | 3.4   | 4.6   |
| SE       | .2                 | .3   | .1    | *     | .0    | .0  |       | .6        | 7.2      |          | .4         | .0    | .6    | .7    | .8    | .8    | .4    | .7    |
| S        | .2                 | .3   | .2    | *     | .0    | .0  |       | .7        | 7.7      |          | .5         | .0    | .8    | .5    | 1.1   | .0    | .7    | .6    |
| SW       | .2                 | .8   | .5    | .1    | .0    | .0  |       | 1.6       | 9.9      |          | 1.5        | .8    | 1.6   | 2.0   | 1.6   | 1.4   | 1.6   | 1.5   |
| W        | .4                 | 1.7  | .9    | .1    | .0    | .0  |       | 3.0       | 8.8      |          | 3.7        | 1.1   | 2.9   | 2.7   | 2.4   | 1.1   | 3.1   | 3.8   |
| NW       | .7                 | 4.1  | 1.7   | .1    | *     | .0  |       | 6.6       | 8.7      |          | 6.8        | 4.3   | 6.5   | 7.1   | 5.3   | 6.6   | 6.9   | 8.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.4                |      |       |       |       |     |       | 1.4       | .0       |          | 1.4        | .6    | 1.4   | 1.3   | 1.9   | .6    | 1.3   | 1.0   |
| TOT OBS  | 681                | 4381 | 6443  | 1291  | 31    | 0   | 12827 |           | 13.0     |          | 2477       | 162   | 2464  | 1200  | 2634  | 158   | 2594  | 1178  |
| TOT PCT  | 5.3                | 34.2 | 50.2  | 10.1  | .2    | .0  | 100.0 |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 5.2                | 15.6 | 6.1   | .4    | .0  |       |  | 27.3      | 12.1     |          | 30.4       | 25.8  | 23.4  | 29.5  |    |
| NE       | 4.7                | 27.4 | 20.4  | 1.8   | .0  |       |  | 54.2      | 14.8     |          | 52.7       | 54.3  | 58.3  | 52.1  |    |
| E        | 1.0                | 2.4  | 1.1   | *     | .0  |       |  | 4.5       | 11.8     |          | 3.0        | 5.9   | 5.3   | 3.8   |    |
| SE       | .3                 | .2   | *     | .0    | .0  |       |  | .6        | 7.2      |          | .4         | .6    | .8    | .5    |    |
| S        | .4                 | .2   | .1    | .0    | .0  |       |  | .7        | 7.7      |          | .5         | .7    | 1.0   | .6    |    |
| SW       | .6                 | .8   | .2    | *     | .0  |       |  | 1.6       | 9.9      |          | 1.5        | 1.7   | 1.6   | 1.6   |    |
| W        | 1.3                | 1.5  | .3    | *     | .0  |       |  | 3.0       | 8.8      |          | 3.6        | 2.9   | 2.4   | 3.3   |    |
| NW       | 2.6                | 3.4  | .5    | *     | .0  |       |  | 6.6       | 8.7      |          | 6.6        | 6.7   | 5.4   | 7.4   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 1.4                |      |       |       |     |       |  | 1.4       | .0       |          | 1.4        | 1.4   | 1.8   | 1.2   |    |
| TOT OBS  | 2250               | 6607 | 3672  | 298   | 0   | 12827 |  |           | 13.0     |          | 2639       | 3664  | 2792  | 3732  |    |
| TOT PCT  | 17.5               | 51.5 | 28.6  | 2.3   | .0  | 100.0 |  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|--------------------|------|-------|-------|-------|-----|------|----------|-----------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |          |           |
| 00003 | 1.4  | 3.8                | 34.2 | 49.1  | 11.2  | .4    | .0  | 13.2 | 100.0    | 2639      |
| 06009 | 1.4  | 3.8                | 34.5 | 50.2  | 9.9   | .2    | .0  | 12.9 | 100.0    | 3664      |
| 12015 | 1.8  | 4.0                | 32.0 | 51.1  | 10.7  | .3    | .0  | 13.1 | 100.0    | 2792      |
| 18021 | 1.2  | 3.9                | 35.4 | 50.3  | 9.0   | .2    | .0  | 12.7 | 100.0    | 3732      |
| TOT   | 1.81 | 500                | 4381 | 6443  | 1291  | 31    | 0   | 13.0 |          | 12827     |
| PCT   | 1.4  | 3.9                | 34.2 | 50.2  | 10.1  | .2    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
|          |      |      |      |               |              |                        |
| N        | 18.7 | 5.8  | 5.8  | 1.7           |              | 2.5                    |
| NE       | 28.0 | 11.2 | 11.7 | 3.8           |              | 2.9                    |
| E        | 1.1  | .4   | .5   | .1            |              | 2.9                    |
| SE       | .1   | .1   | .1   | *             |              | 3.8                    |
| S        | .4   | *    | .2   | .1            |              | 3.3                    |
| SW       | .7   | .3   | .2   | *             |              | 2.5                    |
| W        | 1.6  | .4   | .3   | .1            |              | 2.2                    |
| NW       | 3.0  | 1.1  | .6   | .2            |              | 2.4                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | 1.0  | .2   | .2   | .0            |              | 1.6                    |
| TOT OBS  | 3044 | 1088 | 1094 | 340           | 5566         | 2.7                    |
| TOT PCT  | 54.7 | 19.5 | 19.7 | 6.1           | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| *   | *   | .0  | .5  | 2.0  | 1.9  | .7   | .2   | .1   | .2    | 26.4    |       |
| .0  | .0  | .1  | 1.0 | 4.3  | 3.6  | 1.4  | .4   | .2   | .6    | 43.1    |       |
| .0  | .0  | .0  | *   | .2   | .1   | .1   | .0   | *    | *     | 1.8     |       |
| .0  | .0  | .0  | *   | .1   | *    | *    | *    | *    | .0    | .2      |       |
| .0  | .0  | .0  | *   | *    | *    | .1   | .0   | .0   | .0    | .5      |       |
| .0  | .0  | .0  | *   | *    | *    | *    | .0   | .0   | .0    | 1.2     |       |
| .0  | .0  | .0  | *   | .1   | .1   | .0   | *    | .0   | .0    | 2.2     |       |
| .0  | *   | .0  | *   | .2   | .2   | .1   | .0   | .0   | *     | 4.4     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | *   | .1   | .1   | .0   | *    | .0   | .0    | 1.3     |       |
| 1   | 1   | 4   | 93  | 388  | 341  | 130  | 37   | 18   | 46    | 4507    | 5566  |
| *   | *   | .1  | 1.7 | 7.0  | 6.1  | 2.3  | .7   | .3   | .8    | 81.0    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING<br>(FEET) | VSBY (NH)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.1        | 1.1        | 1.1        | 1.1          | 1.1          | 1.1           | 1.1        |
| = OR >5000        | 1.5         | 1.8        | 1.8        | 1.8        | 1.8          | 1.8          | 1.8           | 1.8        |
| = OR >3500        | 3.5         | 4.1        | 4.1        | 4.1        | 4.1          | 4.1          | 4.1           | 4.1        |
| = OR >2000        | 8.9         | 10.1       | 10.3       | 10.3       | 10.3         | 10.3         | 10.3          | 10.3       |
| = OR >1000        | 14.5        | 16.9       | 17.2       | 17.2       | 17.2         | 17.2         | 17.2          | 17.2       |
| = OR >600         | 15.8        | 18.5       | 18.9       | 18.9       | 18.9         | 18.9         | 18.9          | 18.9       |
| = OR >300         | 15.8        | 18.6       | 18.9       | 19.0       | 19.0         | 19.0         | 19.0          | 19.0       |
| = OR >150         | 15.8        | 18.6       | 19.0       | 19.0       | 19.0         | 19.0         | 19.0          | 19.0       |
| = OR >0           | 15.8        | 18.6       | 19.0       | 19.0       | 19.0         | 19.0         | 19.0          | 19.0       |
| TOTAL             | 894         | 1050       | 1070       | 1072       | 1072         | 1072         | 1072          | 1072       |

TOTAL NUMBER OF OBS: 5643

PCT FREQ NH <5/8: 81.0

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBS CD | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|-----|--------|--------------|
| 31.8 | 17.0 | 14.4 | 11.0 | 6.3 | 4.3 | 5.2 | 5.0 | 4.9 | *      | 5923         |

## APRIL

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1893-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | *    | .0  | .0 | .0 | *   | *   | *   | .0  | .0   | .0    | .1           |
|              | TOT %  | *    | *    | .0  | .0 | .0 | *   | *   | *   | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | .3   | .1  | *  | *  | .0  | .0  | .0  | .0  | .0   | .0    | .6           |
|              | TOT %  | .2   | .3   | .1  | *  | *  | .0  | .0  | .0  | .0  | .0   | .0    | .6           |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   | *     |              |
|              | NO PCP | .1   | .1   | .0  | .0 | .0 | .0  | *   | *   | .0  | .0   | .2    |              |
|              | TOT %  | .1   | .1   | .0  | .0 | .0 | .0  | *   | .1  | .0  | .0   | .2    |              |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .3   | .8   | *   | .0 | *  | *   | *   | *   | .0  | *    | 1.3   |              |
|              | TOT %  | .3   | .8   | *   | .0 | *  | *   | *   | *   | .0  | *    | 1.3   |              |
| 5<10         | PCP    | *    | .1   | .0  | *  | .0 | *   | .0  | .0  | .0  | .0   | .2    |              |
|              | NO PCP | 5.5  | 10.9 | .7  | .1 | .2 | .3  | 1.0 | .0  | .2  | 19.2 |       |              |
|              | TOT %  | 5.6  | 11.0 | .7  | .1 | .2 | .3  | 1.0 | .0  | .2  | 19.4 |       |              |
| 10+          | PCP    | .1   | *    | *   | .0 | *  | .0  | .0  | *   | .0  | .0   | .2    |              |
|              | NO PCP | 25.0 | 42.2 | 1.7 | .3 | .6 | 1.0 | 2.1 | 4.3 | .0  | 1.1  | 78.3  |              |
|              | TOT %  | 25.1 | 42.2 | 1.8 | .3 | .6 | 1.0 | 2.1 | 4.3 | .0  | 1.1  | 78.4  |              |
| TOT OBS      |        |      |      |     |    |    |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |    |    |     |     |     |     |      |       |              |
|              |        | 31.3 | 54.5 | 2.5 | .4 | .8 | 1.4 | 2.3 | 5.4 | .0  | 1.3  | 100.0 | 6640         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | *   | *   | .0  | .0  | .0   | *     |              |
|              | 11-21      | *    | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | *    | *    | .0  | .0 | .0 | *   | *   | *   | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .0  | *  | .0 | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .1   | .1   | *   | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .2   | .2   | .1  | *  | *  | .0  | .0  | .0  | .0  | .0   | .4    |              |
| 1<2          | 0-3        | *    | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0  | *   | .1  | .0  | .0   | .1    |              |
|              | 11-21      | *    | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .1   | .0  | .0 | .0 | .0  | *   | .1  | .0  | .0   | .2    |              |
| 2<5          | 0-3        | *    | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .1   | .1    |              |
|              | 4-10       | .1   | .2   | *   | .0 | *  | *   | *   | .1  | .0  | .0   | .4    |              |
|              | 11-21      | .2   | .5   | *   | .0 | .0 | .0  | *   | *   | .0  | .0   | .7    |              |
|              | 22+        | *    | .1   | *   | .0 | *  | *   | .0  | .0  | .0  | .0   | .2    |              |
|              | TOT %      | .3   | .8   | *   | .0 | *  | *   | *   | .1  | .0  | .1   | 1.4   |              |
| 5<10         | 0-3        | .1   | .1   | *   | .1 | *  | *   | .1  | .1  | .0  | .2   | .7    |              |
|              | 4-10       | 1.6  | 1.7  | .3  | *  | .1 | .2  | .2  | .5  | .0  | .0   | 4.7   |              |
|              | 11-21      | 2.7  | 6.3  | .4  | *  | .1 | .1  | .1  | .3  | .0  | .0   | 9.9   |              |
|              | 22+        | .7   | 2.0  | *   | .0 | *  | *   | .0  | *   | .0  | .0   | 2.8   |              |
|              | TOT %      | 5.0  | 10.1 | .7  | .1 | .2 | .4  | .3  | 1.0 | .0  | .2   | 18.0  |              |
| 10+          | 0-3        | 1.1  | .6   | .1  | *  | .1 | .3  | .6  | .0  | 1.2 | .0   | 4.1   |              |
|              | 4-10       | 10.4 | 10.7 | 1.0 | .2 | .2 | .6  | 1.5 | 3.4 | .0  | .0   | 27.9  |              |
|              | 11-21      | 11.3 | 25.5 | 1.1 | *  | .1 | .3  | .7  | 1.3 | .0  | .0   | 40.5  |              |
|              | 22+        | 1.6  | 5.4  | .2  | *  | .0 | *   | .0  | .1  | .0  | .0   | 7.3   |              |
|              | TOT %      | 24.4 | 42.2 | 2.5 | .3 | .5 | 1.1 | 2.5 | 5.4 | .0  | 1.2  | 79.9  |              |
| TOT OBS      |            |      |      |     |    |    |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |    |    |     |     |     |     |      |       |              |
|              |            | 30.0 | 53.4 | 3.3 | .4 | .7 | 1.4 | 2.8 | 6.5 | .0  | 1.4  | 100.0 | 9337         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .0         | .0         | 1.6        | 5.4          | 5.3          | 1.7          | .6           | .1           | .6    | 15.2  | 84.8               | 1419         |
| 06009         | .0         | .1         | .3         | 2.8        | 11.9         | 10.3         | 3.3          | 1.1          | .5           | .9    | 31.3  | 68.7               | 1378         |
| 12015         | .1         | .0         | .0         | 1.3        | 6.4          | 6.4          | 2.7          | .6           | .4           | 1.1   | 18.9  | 81.1               | 1554         |
| 18021         | .0         | .0         | .0         | .8         | 3.7          | 2.5          | 1.3          | .4           | .2           | .5    | 9.4   | 90.6               | 1505         |
| TOT           | 1          | 1          | 4          | 94         | 395          | 353          | 132          | 38           | 18           | 46    | 1082  | 4774               | 5856         |
| PCT           | *          | *          | .1         | 1.6        | 6.7          | 6.0          | 2.3          | .6           | .3           | .8    | 18.5  | 81.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSRY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | *    | .4    | .1  | 1.3 | 17.8 | 80.3 | 2120         |
| 06009         | .2   | .2    | .2  | 1.6 | 20.3 | 77.5 | 2543         |
| 12015         | .1   | .4    | .2  | 1.6 | 15.6 | 82.1 | 2224         |
| 18021         | .0   | .7    | .3  | 1.2 | 18.8 | 79.0 | 2619         |
| TOT           | 8    | 42    | 20  | 136 | 1731 | 7569 | 9506         |
| PCT           | .1   | .4    | .2  | 1.4 | 18.2 | 79.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSRY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .0           | .0         | 2.9         | 13.9            | 83.2              | 1358         |
| 06009         | .2           | .5         | 5.0         | 28.0            | 67.0              | 1318         |
| 12015         | .1           | .1         | 2.7         | 17.8            | 79.5              | 1505         |
| 18021         | .0           | .0         | 2.1         | 8.8             | 89.2              | 1462         |
| TOT           | 3            | 9          | 176         | 954             | 4513              | 5643         |
| PCT           | .1           | .2         | 3.1         | 16.9            | 80.0              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .0     | 1            | *           |
| 75/79  | *    | *     | .1    | .2    | .2    | .1    | .0    | .0     | 34           | .7          |
| 70/74  | .0   | .0    | .1    | .7    | 2.6   | 3.3   | 1.6   | .4     | 449          | 8.7         |
| 65/69  | .0   | .0    | .1    | 2.1   | 12.5  | 23.4  | 18.1  | 7.1    | 3269         | 63.3        |
| 60/64  | .0   | .0    | *     | .2    | 3.6   | 10.0  | 9.6   | 3.9    | 1406         | 27.2        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | .1     | 7            | .1          |
| TOTAL  | 1    | 14    | 157   | 979   | 1908  | 1517  | 589   | 5166   | 100.0        |             |
| PCT    | *    | .3    | 3.0   | 19.0  | 36.9  | 29.4  | 11.4  |        |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|----|-----|-----|-----|-----|------|
| 80/84 | *    | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   |
| 75/79 | .2   | .3   | *   | .0 | .0 | *   | *   | .1  | .0  | *    |
| 70/74 | 3.1  | 4.0  | .3  | *  | .1 | .2  | .3  | .6  | .0  | .2   |
| 65/69 | 19.5 | 35.5 | 1.3 | .2 | .5 | .9  | 1.5 | 3.6 | .0  | .4   |
| 60/64 | 8.6  | 16.2 | .8  | .1 | .1 | .1  | .3  | .9  | .0  | .1   |
| 55/59 | .0   | .1   | .0  | .0 | .0 | .0  | .0  | *   | .0  | *    |
| TOTAL | 31.3 | 56.0 | 2.3 | .4 | .7 | 1.2 | 2.2 | 5.1 | .0  | .7   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 77  | 70  | 68  | 65  | 62 | 60 | 52  | 65.0 | 2679         |
| 06009         | 83  | 72  | 69  | 65  | 62 | 60 | 54  | 65.7 | 3668         |
| 12015         | 84  | 77  | 74  | 68  | 64 | 61 | 54  | 68.1 | 2734         |
| 18021         | 83  | 77  | 73  | 67  | 63 | 61 | 52  | 67.4 | 3668         |
| TOT           | 84  | 75  | 72  | 66  | 62 | 60 | 52  | 66.4 | 12749        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.2   | 13.2  | 35.6  | 34.2  | 15.8   | 79   | 1306         |
| 06009         | .1   | 1.9   | 14.2  | 34.1  | 34.4  | 15.3   | 79   | 1281         |
| 12015         | .0   | 6.6   | 24.6  | 39.7  | 23.0  | 6.0    | 74   | 1327         |
| 18021         | .0   | 3.8   | 23.5  | 37.9  | 26.2  | 8.5    | 75   | 1353         |
| TOT           | 1    | 180   | 1000  | 1942  | 1547  | 597    | 77   | 5267         |



## APRIL

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | *        | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .1       | .0       | *        | *        | .1       | 11    | .0       | .2        |
| 11/13              | .0       | .0       | .0       | *        | *        | *        | .2       | .1       | .0       | 22    | *        | .3        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .1       | .3       | .1       | .0       | 44    | .1       | .6        |
| 7/8                | .0       | .0       | .0       | *        | .2       | .5       | .4       | *        | .0       | 75    | *        | 1.2       |
| 6                  | .0       | .0       | .0       | *        | .3       | .6       | .3       | .0       | .0       | 70    | .1       | 1.1       |
| 5                  | .0       | .0       | .0       | .1       | 1.0      | 1.4      | .4       | *        | .0       | 178   | .1       | 2.9       |
| 4                  | .0       | .0       | .0       | .4       | 1.4      | 1.7      | .3       | *        | .0       | 228   | .2       | 3.6       |
| 3                  | .0       | .0       | .0       | .5       | 2.7      | 2.0      | .2       | .0       | .0       | 327   | .1       | 5.3       |
| 2                  | .0       | .0       | *        | 1.4      | 5.5      | 2.5      | *        | *        | .0       | 574   | .1       | 9.3       |
| 1                  | .0       | .0       | .0       | 2.7      | 8.6      | 2.1      | *        | *        | .0       | 818   | .2       | 13.3      |
| 0                  | .0       | .0       | *        | 5.3      | 11.9     | 1.4      | *        | .0       | .0       | 1126  | .1       | 18.4      |
| -1                 | .0       | .0       | .1       | 5.6      | 11.3     | .6       | .0       | .0       | .0       | 1063  | .3       | 17.3      |
| -2                 | .0       | .0       | .1       | 4.8      | 6.3      | .2       | *        | .0       | .0       | 693   | .1       | 11.3      |
| -3                 | .0       | .0       | *        | 3.4      | 3.5      | .1       | .0       | *        | .0       | 430   | .1       | 7.0       |
| -4                 | .0       | .0       | .2       | 1.8      | 1.4      | *        | .0       | *        | .0       | 208   | *        | 3.4       |
| -5                 | .0       | *        | .2       | .9       | .7       | *        | .0       | .0       | .0       | 115   | .0       | 1.9       |
| -6                 | .0       | .0       | *        | .3       | .1       | .0       | *        | .0       | .0       | 28    | *        | .4        |
| -7/-8              | .0       | *        | .1       | .3       | .1       | *        | .0       | .0       | .0       | 37    | .0       | .6        |
| -9/-10             | .0       | *        | *        | .1       | *        | .0       | .0       | .0       | .0       | 10    | .0       | .2        |
| -11/-13            | *        | .1       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 8     | .0       | .1        |
| -14/-16            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 3        | 8        | 55       | 1687     | 3339     | 803      | 144      | 24       | 5        | 6068  | 97       | 5971      |
| PCT                | *        | .1       | .9       | 27.8     | 55.0     | 13.2     | 2.4      | .4       | .1       | 100.0 | 1.6      | 98.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | .5  | 1.7  | .1    | .0    | .0    | .0  | 2.3  | .3  | 1.2  | .3    | .0    | .0    | .0  | 1.8  |
| 1-2     | .4  | 5.8  | 2.3   | .0    | .0    | .0  | 8.5  | .1  | 5.6  | 5.0   | .0    | .0    | .0  | 10.7 |
| 3-4     | .0  | 3.1  | 6.7   | .4    | .0    | .0  | 10.3 | .0  | 3.4  | 11.2  | 1.0   | .0    | .0  | 15.6 |
| 5-6     | .0  | .6   | 4.2   | .8    | .0    | .0  | 5.5  | .0  | .5   | 10.4  | 2.4   | .0    | .0  | 13.3 |
| 7       | .0  | .2   | 2.3   | .8    | .0    | .0  | 3.2  | .0  | .3   | 5.9   | 2.3   | *     | .0  | 8.5  |
| 8-9     | .0  | *    | .7    | .5    | .0    | .0  | 1.3  | .0  | *    | 2.2   | 1.8   | *     | .0  | 4.0  |
| 10-11   | .0  | .0   | .2    | .3    | *     | .0  | .5   | .0  | *    | .7    | .9    | .0    | .0  | 1.7  |
| 12      | .0  | .0   | .1    | .1    | .1    | .0  | .2   | .0  | .0   | .2    | .2    | .1    | .0  | .4   |
| 13-16   | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | *     | .2    | *     | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | *     | .0    | .0  | .1   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .8  | 11.5 | 16.5  | 2.9   | .1    | .0  | 31.8 | .4  | 11.1 | 35.9  | 8.8   | .1    | .0  | 56.4 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | *   | .1   | *     | .0    | .0    | .0  | .1  | *   | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .2   | .1    | .0    | .0    | .0  | .4  | *   | *    | .0    | .0    | .0    | .0  | *   |
| 3-4     | .0  | .1   | .6    | .0    | .0    | .0  | .7  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .3    | *     | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .1   | .1    | *     | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | .6   | 1.3   | .1    | .0    | .0  | 2.0 | *   | .1   | *     | *     | .0    | .0  | .2  |

PERIOD: (OVER-ALL) 1963-1973

APRIL

TABLE 18 (CONT)

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .1  | .1   | .0    | .0    | .0    | .0  |  | .1  | .1  | .0   | .0    | .0    | .0    | .0  |  | .1  |
| 1-2     | .1  | .0   | .0    | .0    | .0    | .0  |  | .1  | .1  | .0   | .0    | .0    | .0    | .0  |  | .2  |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  |  | .1  | .0  | .1   | .1    | .0    | .0    | .0  |  | .3  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .2    | .0    | .0    | .0  |  | .2  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .1    | .0    | .0  |  | .0  |
| TOT PCT | .1  | .1   | .1    | .0    | .0    | .0  |  | .3  | .1  | .3   | .3    | .1    | .0    | .0  |  | .8  |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .1  | .3   | .0    | .0    | .0    | .0  |  | .3  | .2  | .5   | .0    | .0    | .0    | .0  |  | .7  |           |
| 1-2     | .2  | .6   | .2    | .0    | .0    | .0  |  | 1.0 | .1  | 1.4  | .2    | .0    | .0    | .0  |  | 1.7 |           |
| 3-4     | .0  | .2   | .4    | .0    | .0    | .0  |  | .6  | .0  | .7   | .5    | .0    | .0    | .0  |  | 1.2 |           |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  | .0  | .2   | .3    | .0    | .0    | .0  |  | .5  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .1   | .1    | .0    | .0    | .0  |  | .2  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .3  | 1.1  | .7    | .0    | .0    | .0  |  | 2.1 | .3  | 2.7  | 1.2   | .2    | .0    | .0  |  | 4.4 | 98.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.4 | 4.0  | .4    | .0    | .0    | .0  | 7.8   |         |
| 1-2     | 1.2 | 13.8 | 7.7   | .0    | .0    | .0  | 22.7  |         |
| 3-4     | .0  | 7.7  | 19.6  | 1.4   | .0    | .0  | 28.6  |         |
| 5-6     | .0  | 1.3  | 15.3  | 3.3   | .0    | .0  | 19.9  |         |
| 7       | .0  | .6   | 8.4   | 3.1   | .0    | .0  | 12.2  |         |
| 8-9     | .0  | .0   | 2.9   | 2.4   | .0    | .0  | 5.3   |         |
| 10-11   | .0  | .1   | .9    | 1.3   | .0    | .0  | 2.3   |         |
| 12      | .0  | .0   | .3    | .3    | .1    | .0  | .7    |         |
| 13-16   | .0  | .0   | .1    | .2    | .0    | .0  | .4    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.6 | 27.4 | 55.7  | 12.0  | .2    | .0  | 100.0 | 3489    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| 6            | 1.1 | 6.6  | 9.8  | 6.2  | 4.2  | 1.4  | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1288  | 4        |
| 6-7          | .0  | 1.2  | 4.7  | 6.6  | 6.0  | 3.0  | 1.7   | .8  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1056  | 6        |
| 8-9          | .0  | .3   | 1.8  | 3.0  | 4.3  | 3.0  | 1.8   | .6  | .5    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 655   | 7        |
| 10-11        | .0  | .5   | .7   | 1.0  | 1.0  | .7   | .3    | .6  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 218   | 7        |
| 12-13        | .0  | .0   | 1.3  | .7   | .3   | .1   | .2    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 118   | 5        |
| >13          | .0  | .0   | .0   | .2   | .3   | .1   | .2    | .0  | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 43    | 9        |
| INDET        | 2.5 | 3.4  | 5.1  | 3.6  | 3.2  | 1.9  | 1.0   | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 911   | 4        |
| TOTAL        | 157 | 517  | 1000 | 911  | 829  | 439  | 243   | 113 | 75    | 1     | 4     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4289  | 5        |
| PCT          | 3.7 | 12.1 | 23.3 | 21.2 | 19.3 | 10.2 | 5.7   | 2.6 | 1.7   | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0005 CENTRAL SPANISH SAMARA  
24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| N        | .1                 | .1        | *    | .0        | .0   | .0              | .0   | .2                      | .1             | .6        | 2.0         | .1                  | 3.3        | .3              | 93.5       |
| NE       | *                  | .1        | .1   | .0        | .0   | .0              | .0   | .2                      | .0             | .4        | 2.1         | .0                  | 3.0        | .3              | 93.9       |
| E        | .0                 | .0        | .6   | .0        | .0   | .0              | .0   | .6                      | .0             | .0        | 1.7         | .0                  | 1.6        | .0              | 98.1       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 1.2         | .0                  | .0         | .0              | 98.8       |
| S        | 2.1                | .0        | .0   | .0        | .0   | .0              | .0   | 2.1                     | .0             | .0        | .0          | .0                  | .0         | .0              | 97.9       |
| SW       | .5                 | .0        | .0   | .0        | .0   | .0              | .0   | .5                      | .2             | 3.4       | 1.0         | .0                  | .0         | .0              | 94.9       |
| W        | 1.0                | .0        | .0   | .0        | .0   | .0              | .0   | 1.0                     | 1.6            | 1.3       | 2.9         | .0                  | .6         | .0              | 93.2       |
| NW       | .0                 | .1        | .0   | .0        | .0   | .0              | .3   | .4                      | .1             | .8        | 2.5         | .1                  | 2.5        | .0              | 93.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 1.8       | .0          | .0                  | 1.8        | .0              | 96.4       |
| TOT PCT  | .1                 | .1        | .1   | .0        | .0   | .0              | *    | .2                      | .1             | .6        | 2.0         | *                   | 2.9        | .3              | 93.9       |
| TOT OBS: | 6883               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| 00003      | .2                 | .2        | .0   | .0        | .0   | .0              | .0   | .4                      | .1             | 1.2       | 1.1         | .0                  | 2.7        | .1              | 94.5       |
| 06009      | .1                 | .1        | .2   | .0        | .0   | .0              | .1   | .3                      | .1             | .9        | 2.8         | .1                  | 2.0        | .2              | 93.7       |
| 12015      | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .0        | 2.0         | .1                  | 3.7        | .5              | 93.6       |
| 18021      | .1                 | .1        | .0   | .0        | .0   | .0              | .0   | .2                      | .0             | .2        | 2.3         | .0                  | 3.2        | .3              | 93.8       |
| TOT PCT    | .1                 | .1        | .1   | .0        | .0   | .0              | *    | .2                      | .1             | .6        | 2.1         | *                   | 2.9        | .3              | 93.9       |
| TOT OBS:   | 6987               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | .9                 | 13.0 | 15.3  | 1.9   | *     | .0  |       | 31.1      | 12.2     | 34.7     | 36.4       | 31.5  | 24.1  | 27.5  | 32.4  | 34.1  | 30.3  |    |
| NE       | .7                 | 15.1 | 32.3  | 6.0   | .1    | .0  |       | 54.2      | 14.2     | 50.3     | 50.0       | 54.0  | 59.7  | 57.2  | 54.3  | 52.5  | 55.4  |    |
| E        | .4                 | 1.4  | 1.7   | .2    | *     | .0  |       | 3.6       | 11.5     | 2.8      | 2.8        | 3.4   | 6.1   | 4.8   | .9    | 2.7   | 3.2   |    |
| SE       | .1                 | .2   | .1    | *     | .0    | .0  |       | .4        | 7.5      | .3       | .0         | .4    | .7    | .7    | .2    | .5    | .2    |    |
| S        | .1                 | .3   | .1    | *     | .0    | .0  |       | .5        | 8.7      | .6       | .0         | .6    | .3    | .8    | .5    | .4    | .2    |    |
| SW       | .2                 | .7   | .2    | *     | .0    | .0  |       | 1.2       | 7.6      | 1.5      | 1.3        | 1.0   | .9    | 1.3   | 1.9   | 1.1   | .8    |    |
| W        | .3                 | 1.5  | .5    | *     | .0    | .0  |       | 2.3       | 7.9      | 2.6      | 1.1        | 2.3   | 1.8   | 2.1   | 1.7   | 2.2   | 2.9   |    |
| NW       | .6                 | 3.8  | 1.3   | *     | .0    | .0  |       | 5.6       | 8.1      | 6.1      | 7.8        | 5.7   | 5.7   | 4.6   | 6.9   | 5.7   | 6.2   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 1.0                |      |       |       |       |     |       | 1.0       | .0       | 1.3      | .6         | 1.2   | .8    | 1.1   | 1.2   | .7    | .9    |    |
| TOT OBS  | 546                | 4641 | 6649  | 1063  | 21    | 0   | 12920 |           | 12.7     | 2546     | 154        | 2497  | 1194  | 2641  | 162   | 2550  | 1176  |    |
| TOT PCT  | 4.2                | 35.9 | 51.5  | 8.2   | .2    | .0  |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |    | 41+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |    |
|----------|--------------------|------|-------|-------|----|-------|-----------|----------|----------|------------|-------|-------|----|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |    |       |           |          |          | 00         | 06    | 12    | 18 | 21 |
| N        | 5.3                | 18.3 | 7.2   | .3    | .0 |       | 31.1      | 12.2     | 34.8     | 29.1       | 27.8  | 32.9  |    |    |
| NE       | 4.4                | 29.9 | 19.0  | 1.0   | *  |       | 54.2      | 14.2     | 50.3     | 55.8       | 57.1  | 53.4  |    |    |
| E        | .8                 | 2.0  | .8    | .1    | .0 |       | 3.6       | 11.5     | 2.8      | 4.3        | 4.5   | 2.9   |    |    |
| SE       | .2                 | .2   | .1    | .0    | .0 |       | .4        | 7.5      | .3       | .5         | .6    | .4    |    |    |
| S        | .3                 | .2   | .1    | .0    | .0 |       | .5        | 8.7      | .6       | .5         | .8    | .4    |    |    |
| SW       | .6                 | .5   | .1    | .0    | .0 |       | 1.2       | 7.6      | 1.4      | 1.0        | 1.4   | 1.0   |    |    |
| W        | 1.0                | 1.1  | .1    | *     | .0 |       | 2.3       | 7.9      | 2.5      | 2.1        | 2.1   | 2.4   |    |    |
| NW       | 2.4                | 3.0  | .3    | .0    | .0 |       | 5.6       | 8.1      | 6.2      | 5.7        | 4.7   | 5.8   |    |    |
| VAR      | .0                 | .0   | .0    | .0    | .0 |       | .0        | .0       | .0       | .0         | .0    | .0    |    |    |
| CALM     | 1.0                |      |       |       |    |       | 1.0       | .0       | 1.2      | 1.1        | 1.1   | .7    |    |    |
| TOT OBS  | 2084               | 7113 | 3544  | 177   | 2  | 12920 |           | 12.7     | 2700     | 3691       | 2803  | 3726  |    |    |
| TOT PCT  | 16.1               | 55.1 | 27.4  | 1.4   | *  |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |    |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |     |       |          |           |
| 00003 | 1.2  | 2.9 | 35.7 | 51.7               | 8.2   | .3    | .0 | .0  | 12.9  | 100.0    | 2700      |
| 06009 | 1.1  | 3.4 | 37.4 | 49.5               | 8.4   | .2    | .0 | .0  | 12.5  | 100.0    | 3691      |
| 12015 | 1.1  | 3.4 | 34.0 | 52.2               | 9.2   | .1    | .0 | .0  | 13.0  | 100.0    | 2803      |
| 18021 | .7   | 3.2 | 36.0 | 52.6               | 7.4   | .1    | .0 | .0  | 12.7  | 100.0    | 3726      |
| TOT   | 130  | 416 | 4641 | 6649               | 1063  | 21    | 0  | 0   | 12.7  |          | 12920     |
| PCT   | 1.0  | 3.2 | 35.9 | 51.5               | 8.2   | .2    | .0 | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 20.3 | 6.6  | 7.4  | 2.9          |              | 2.8                    |
| NE       | 22.1 | 9.9  | 13.0 | 4.8          |              | 3.4                    |
| E        | .9   | .4   | .4   | .2           |              | 3.2                    |
| SE       | .2   | .1   | *    | .0           |              | 1.8                    |
| S        | .3   | .2   | .2   | *            |              | 2.9                    |
| SW       | .5   | .4   | .4   | .1           |              | 3.4                    |
| W        | 1.0  | .4   | .6   | .1           |              | 3.1                    |
| NW       | 3.0  | 1.3  | 1.1  | .4           |              | 2.8                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .5   | .2   | .0   | .1           |              | 2.0                    |
| TOT OBS  | 2708 | 1077 | 1279 | 482          | 5546         | 3.1                    |
| TOT PCT  | 48.8 | 19.4 | 23.1 | 8.7          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|    | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| *  |            |            | .2         | 1.1        | 2.4          | 1.9          | 1.0          | .2           | .4           | .4    | 29.6               |              |
| .1 | *          | *          | .1         | 1.2        | 6.0          | 3.6          | 1.8          | .3           | .2           | .6    | 35.9               |              |
| .0 | .0         | .0         | *          | .2         | .1           | .1           | *            | .0           | .0           | .0    | 1.5                |              |
| .0 | .0         | .0         | .0         | .0         | *            | *            | .0           | .0           | .0           | .0    | .3                 |              |
| .0 | .0         | .0         | *          | .1         | *            | *            | *            | .0           | .0           | .0    | .5                 |              |
| *  | *          | .0         | *          | .1         | *            | *            | *            | .1           | .0           | .0    | 1.1                |              |
| *  | .0         | .0         | *          | .1         | .1           | .1           | *            | *            | .0           | *     | 1.6                |              |
| *  | .0         | .0         | *          | .3         | .2           | .1           | .1           | *            | *            | .1    | 4.9                |              |
| .0 | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| .0 | .0         | .0         | .0         | *          | .1           | *            | *            | .0           | .0           | .0    | .7                 |              |
| 6  | 4          | 16         | 136        | 511        | 335          | 180          | 40           | 37           | 58           | 4223  | 5546               |              |
| .1 | .1         | .3         | 2.5        | 9.2        | 6.0          | 3.2          | .7           | .7           | 1.0          | 76.1  | 100.0              |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      | OR   |      |      | OR    |      |  |
|-------------------|-----------|------|------|------|------|------|-------|------|--|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |  |
| >6500             | 1.1       | 1.6  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7   | 1.7  |  |
| >5000             | 1.8       | 2.3  | 2.4  | 2.4  | 2.4  | 2.4  | 2.4   | 2.4  |  |
| >3500             | 4.4       | 5.5  | 5.7  | 5.7  | 5.7  | 5.7  | 5.7   | 5.7  |  |
| >2000             | 9.2       | 11.4 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7  | 11.7 |  |
| >1000             | 16.0      | 20.3 | 20.8 | 20.8 | 20.8 | 20.8 | 20.8  | 20.8 |  |
| >600              | 17.8      | 22.6 | 23.2 | 23.3 | 23.3 | 23.3 | 23.3  | 23.3 |  |
| >300              | 18.0      | 22.8 | 23.5 | 23.5 | 23.5 | 23.5 | 23.5  | 23.5 |  |
| >150              | 18.0      | 22.9 | 23.6 | 23.6 | 23.6 | 23.6 | 23.6  | 23.6 |  |
| >0                | 18.0      | 22.9 | 23.7 | 23.7 | 23.7 | 23.7 | 23.7  | 23.7 |  |
| TOTAL             | 1009      | 1284 | 1325 | 1326 | 1326 | 1326 | 1328  | 1328 |  |

TOTAL NUMBER OF OBS: 5598

PCT FREQ NH <5/8: 76.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-------|--------------|
| 31.5 | 14.4 | 13.1 | 9.9 | 6.9 | 4.8 | 5.8 | 6.6 | 6.9 | .1    | 5861         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|------|------|------|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | NO PCP | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | .0   | .0   | .1    |              |
|              | TOT %  | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | .0   | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | NO PCP | .2   | .2   | * .0 | .0   | .0   | .0   | .0   | .1   | .0   | .0   | .4    |              |
|              | TOT %  | .2   | .2   | * .0 | .0   | .0   | .0   | .0   | .1   | .0   | .0   | .4    |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | NO PCP | .1   | .2   | .0   | .0   | .0   | .0   | .0   | * .0 | .0   | .0   | .4    |              |
|              | TOT %  | .1   | .2   | .0   | .0   | .0   | .0   | .0   | * .0 | .0   | .0   | .4    |              |
| 2<5          | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | NO PCP | .7   | 1.0  | * .0 | * .0 | * .0 | * .0 | * .2 | .0   | * .0 | * .0 | 2.0   |              |
|              | TOT %  | .7   | 1.0  | * .0 | * .0 | * .0 | * .0 | * .2 | .0   | * .0 | * .0 | 2.0   |              |
| 5<10         | PCP    | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .0   | .0   | .1    |              |
|              | NO PCP | 8.4  | 12.6 | .6   | * .2 | .3   | .5   | .9   | .0   | .1   | 23.7 |       |              |
|              | TOT %  | 8.4  | 12.6 | .6   | * .2 | .4   | .5   | .9   | .0   | .1   | 23.8 |       |              |
| 10+          | PCP    | * .0 | .1   | .0   | .0   | .0   | .0   | .0   | * .0 | .0   | .0   | .1    |              |
|              | NO PCP | 26.7 | 36.3 | 1.6  | .3   | .5   | 1.1  | 1.7  | 4.4  | .0   | .6   | 73.2  |              |
|              | TOT %  | 26.8 | 36.3 | 1.6  | .3   | .5   | 1.1  | 1.7  | 4.4  | .0   | .6   | 73.3  |              |
| TOT OBS      |        |      |      |      |      |      |      |      |      |      |      |       | 6876         |
| TOT PCT      |        | 36.2 | 50.3 | 2.3  | .3   | .7   | 1.5  | 2.2  | 5.6  | .0   | .8   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 4-10       | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | .0  | .0   | *     |              |
|              | 4-10       | * .0 | * .0 | .0   | .0   | .0   | .0   | .0   | * .0 | .0  | .0   | .1    |              |
|              | 11-21      | * .1 | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .1    |              |
|              | 22+        | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %      | .1   | .1   | * .0 | .0   | .0   | .0   | .0   | * .0 | .0  | .0   | .3    |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | *    | *     |              |
|              | 4-10       | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | .0  | .0   | .1    |              |
|              | 11-21      | * .1 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0   | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %      | .1   | .2   | .0   | .0   | .0   | .0   | .0   | * .0 | .0  | *    | .3    |              |
| 2<5          | 0-3        | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | *    | .1    |              |
|              | 4-10       | .3   | .2   | * .0 | * .0 | * .0 | * .0 | * .1 | .0   | .0  | .0   | .6    |              |
|              | 11-21      | .3   | .5   | * .0 | * .0 | * .0 | * .0 | * .0 | .0   | .0  | .0   | .9    |              |
|              | 22+        | * .2 | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .2    |              |
|              | TOT %      | .6   | .8   | .1   | .0   | * .0 | * .0 | * .1 | .0   | .0  | *    | 1.7   |              |
| 5<10         | 0-3        | .2   | .2   | * .0 | * .0 | .0   | .1   | .1   | .1   | .0  | .2   | .9    |              |
|              | 4-10       | 2.6  | 2.7  | .2   | * .1 | .1   | .2   | .4   | .0   | .0  | .0   | 6.5   |              |
|              | 11-21      | 3.9  | 7.2  | .3   | .0   | * .1 | .1   | .2   | .0   | .0  | .0   | 11.9  |              |
|              | 22+        | .5   | 1.8  | * .0 | .0   | .0   | * .0 | * .0 | .0   | .0  | .0   | 2.5   |              |
|              | TOT %      | 7.3  | 11.9 | .6   | * .1 | .3   | .4   | .8   | .0   | .2  | .2   | 21.7  |              |
| 10+          | 0-3        | .6   | .5   | .3   | .1   | .1   | .1   | .2   | .4   | .0  | .7   | 2.9   |              |
|              | 4-10       | 10.2 | 10.0 | .8   | .1   | .2   | .7   | 1.3  | 3.1  | .0  | .0   | 26.5  |              |
|              | 11-21      | 12.9 | 25.2 | 1.1  | .1   | .1   | .1   | .3   | .8   | .0  | .0   | 40.7  |              |
|              | 22+        | 1.5  | 4.1  | .1   | * .0 | * .0 | * .0 | * .0 | .0   | .0  | .0   | 5.8   |              |
|              | TOT %      | 25.3 | 39.8 | 2.3  | .3   | .4   | 1.0  | 1.8  | 4.3  | .0  | .7   | 75.9  |              |
| TOT OBS      |            |      |      |      |      |      |      |      |      |     |      |       | 9545         |
| TOT PCT      |            | 33.4 | 52.9 | 3.0  | .3   | .5   | 1.3  | 2.3  | 5.4  | .0  | .9   | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET/NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|--------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                    |              |
| 00003 | .0  | .0  | .1  | 1.2 | 6.0  | 3.7  | 2.3  | .7   | .1   | .6    | 14.7  | 85.3               | 1404         |
| 06009 | .2  | .1  | .4  | 4.8 | 15.6 | 9.6  | 4.2  | .9   | .5   | 1.5   | 37.7  | 62.3               | 1375         |
| 12015 | .2  | .1  | .5  | 2.1 | 9.1  | 6.0  | 3.8  | .8   | 1.4  | 1.6   | 23.4  | 74.6               | 1532         |
| 18021 | .0  | .1  | .1  | 1.4 | 5.2  | 4.3  | 2.2  | .5   | .5   | .5    | 14.9  | 85.1               | 1467         |
| TOT   | 6   | 4   | 16  | 136 | 513  | 339  | 181  | 42   | 38   | 59    | 1334  | 4444               | 5778         |
| PCT   | .1  | .1  | .3  | 2.4 | 8.9  | 5.9  | 3.1  | .7   | .7   | 1.0   | 23.1  | 76.9               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|-------|------|-------|-----|-----|------|------|--------------|
| (GMT) |      |       |     |     |      |      |              |
| 00003 | .0   | .2    | .2  | 1.8 | 20.6 | 77.2 | 2171         |
| 06009 | .1   | .5    | .2  | 1.8 | 25.4 | 72.0 | 2586         |
| 12015 | *    | .2    | .4  | 2.2 | 18.6 | 78.6 | 2241         |
| 18021 | .0   | .3    | .5  | 1.4 | 22.1 | 75.6 | 2655         |
| TOT   | 4    | 29    | 31  | 172 | 2109 | 7308 | 9653         |
| PCT   | *    | .3    | .3  | 1.8 | 21.8 | 75.7 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET/NH >4/8) BY HOUR

| HR    | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|-------|--------------|------------|-------------|----------------|-------------------|--------------|
| (GMT) |              |            |             |                |                   |              |
| 00003 | .0           | .1         | 3.2         | 13.7           | 83.1              | 1347         |
| 06009 | .2           | .8         | 7.6         | 32.3           | 60.1              | 1332         |
| 12015 | .2           | .8         | 4.8         | 22.4           | 72.8              | 1485         |
| 18021 | .0           | .2         | 3.6         | 13.1           | 83.3              | 1434         |
| TOT   | 6            | 28         | 268         | 1135           | 4195              | 5598         |
| PCT   | .1           | .5         | 4.8         | 20.3           | 74.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | *     | .0    | .0    | *     | .0    | *     | .0     | 3            | .1          |
| 75/79  | .0   | .0    | .1    | .1    | .7    | .6    | .1    | *      | 89           | 1.6         |
| 70/74  | .0   | .0    | .1    | .4    | 3.6   | 6.4   | 4.0   | 1.5    | 871          | 15.9        |
| 65/69  | .0   | .0    | .0    | .4    | 5.5   | 25.1  | 30.8  | 10.9   | 3976         | 72.8        |
| 60/64  | .0   | .0    | .0    | .3    | 1.9   | 4.0   | 3.3   | 3.2    | 522          | 9.6         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | *      | 2            | *           |
| TOTAL  | 0    | 1     | 7     | 55    | 556   | 1858  | 2126  | 861    | 5464         | 100.0       |
| PCT    | .0   | *     | .1    | 1.0   | 10.2  | 34.0  | 38.9  | 15.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|----|-----|-----|-----|-----|------|
| 85/89 | .0   | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | *    |
| 80/84 | *    | *    | .0  | .0 | .0 | .0  | .0  | *   | .0  | .0   |
| 75/79 | .7   | .7   | *   | *  | *  | *   | .0  | .1  | .0  | *    |
| 70/74 | 5.5  | 7.2  | .7  | .1 | .1 | .5  | .5  | 1.2 | .0  | .2   |
| 65/69 | 25.9 | 38.1 | 1.3 | .2 | .5 | .8  | 1.5 | 4.3 | .0  | .3   |
| 60/64 | 3.5  | 5.4  | .2  | *  | *  | *   | *   | .3  | .0  | *    |
| 55/59 | *    | *    | .0  | .0 | .0 | .0  | .0  | .0  | .0  | .0   |
| TOTAL | 35.7 | 51.5 | 2.2 | .3 | .6 | 1.3 | 2.0 | 5.9 | .0  | .5   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|----|----|-----|------|--------------|
| (GMT) |     |     |     |     |    |    |     |      |              |
| 00003 | 79  | 72  | 69  | 65  | 63 | 61 | 51  | 66.2 | 2711         |
| 06009 | 82  | 72  | 70  | 66  | 63 | 61 | 51  | 66.2 | 3681         |
| 12015 | 88  | 78  | 75  | 69  | 65 | 63 | 54  | 69.4 | 2729         |
| 18021 | 87  | 78  | 75  | 68  | 65 | 63 | 57  | 68.8 | 3657         |
| TOT   | 88  | 77  | 73  | 67  | 64 | 62 | 51  | 67.6 | 12778        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|-------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| (GMT) |      |       |       |       |       |       |       |        |      |              |
| 00003 | .0   | .1    | 3.7   | 27.9  | 44.1  | 24.2  | 83    | 1354   |      |              |
| 06009 | .0   | .3    | 6.2   | 27.1  | 43.9  | 22.5  | 82    | 1351   |      |              |
| 12015 | .0   | 2.8   | 18.6  | 39.8  | 31.7  | 7.0   | 76    | 1383   |      |              |
| 18021 | .0   | 1.3   | 11.7  | 41.0  | 35.5  | 10.4  | 78    | 1431   |      |              |
| TOT   | 0    | 64    | 559   | 1882  | 2137  | 877   | 80    | 5519   |      |              |



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PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA | 49 | 53 | 57 | 61   | 65   | 69   | 73  | 77 | 81 | 85    | TOT  | W    | WD   |
|---------|----|----|----|------|------|------|-----|----|----|-------|------|------|------|
| TMP DIF | 52 | 56 | 60 | 64   | 68   | 72   | 76  | 80 | 84 | 88    |      | FOG  | FOG  |
| 20/22   | .0 | .0 | .0 | .0   | .0   | .0   | .0  | .0 | .0 | *     | 1    | .0   | *    |
| 14/16   | .0 | .0 | .0 | .0   | *    | *    | *   | .1 | *  | .0    | 12   | .0   | .2   |
| 11/13   | .0 | .0 | .0 | .0   | *    | *    | .1  | .2 | .1 | .0    | 31   | .0   | .5   |
| 9/10    | .0 | .0 | .0 | .0   | *    | .2   | .4  | .1 | *  | .0    | 44   | *    | .7   |
| 7/8     | .0 | .0 | .0 | .0   | .2   | .6   | .6  | .2 | *  | .0    | 95   | *    | 1.5  |
| 6       | .0 | .0 | .0 | .0   | .3   | .5   | .7  | .1 | .0 | *     | 98   | .1   | 1.5  |
| 5       | .0 | .0 | .0 | .1   | 1.2  | 2.0  | .8  | .0 | *  | .0    | 256  | .1   | 3.9  |
| 4       | .0 | .0 | .0 | .4   | 1.6  | 2.7  | .5  | *  | *  | .0    | 326  | .1   | 5.1  |
| 3       | .0 | .0 | .0 | .3   | 2.6  | 3.1  | .4  | *  | .0 | .0    | 403  | .2   | 6.3  |
| 2       | .0 | .0 | .0 | .7   | 6.1  | 4.1  | .2  | *  | .0 | .0    | 704  | .2   | 11.0 |
| 1       | .0 | .0 | .0 | 1.3  | 10.2 | 4.4  | .3  | .0 | .0 | .0    | 1017 | .2   | 16.0 |
| 0       | .0 | .0 | *  | 2.7  | 13.4 | 3.5  | .1  | *  | .0 | .0    | 1240 | .6   | 19.2 |
| -1      | .0 | .0 | *  | 1.9  | 12.3 | 1.5  | *   | *  | .0 | .0    | 983  | .4   | 15.3 |
| -2      | .0 | .0 | *  | 1.5  | 6.7  | .7   | .0  | .0 | .0 | .0    | 564  | .1   | 8.9  |
| -3      | .0 | .0 | *  | .9   | 2.7  | .3   | .0  | *  | .0 | .0    | 248  | .0   | 4.0  |
| -4      | .0 | .0 | *  | .6   | .9   | .1   | *   | .0 | .0 | .0    | 102  | *    | 1.6  |
| -5      | .0 | .0 | .1 | .4   | .6   | .1   | .0  | *  | .0 | .0    | 76   | *    | 1.2  |
| -6      | .0 | .0 | .0 | .1   | .2   | *    | .0  | .0 | .0 | .0    | 24   | *    | .4   |
| -7/-8   | .0 | .0 | .1 | .2   | .2   | *    | .0  | .0 | .0 | .0    | 27   | .0   | .4   |
| -9/-10  | *  | .1 | .1 | *    | .0   | .0   | .0  | .0 | .0 | .0    | 13   | .0   | .2   |
| -11/-13 | *  | .0 | .0 | *    | .0   | .0   | .0  | .0 | .0 | .0    | 2    | .0   | *    |
| -14/-16 | *  | *  | .0 | .0   | .0   | .0   | .0  | .0 | .0 | .0    | 2    | .0   | *    |
| TOTAL   | 5  | 5  | 22 | 704  | 3724 | 1496 | 248 | 13 | 2  | 6268  | 137  | 6131 |      |
| PCT     | .1 | .1 | .4 | 11.2 | 59.4 | 23.9 | 4.0 | .8 | .2 | 100.0 | 2.2  | 97.8 |      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | 1.7  | *     | .0    | .0    | .0  | 2.1  | .2  | .6   | .2    | .0    | .0    | .0  | 1.1  |
| 1-2     | .3  | 6.3  | 2.9   | .0    | .0    | .0  | 9.5  | .1  | 3.9  | 4.5   | .0    | .0    | .0  | 8.5  |
| 3-4     | .0  | 3.3  | 8.0   | .2    | .0    | .0  | 11.5 | .0  | 2.6  | 10.2  | .8    | .0    | .0  | 13.6 |
| 5-6     | .0  | .7   | 7.4   | .6    | .0    | .0  | 8.7  | .0  | .8   | 9.5   | 2.3   | *     | .0  | 12.6 |
| 7       | .0  | *    | 2.8   | 1.1   | .0    | .0  | 3.9  | .0  | .1   | 5.4   | 2.5   | .1    | .0  | 8.1  |
| 8-9     | .0  | .0   | .8    | .7    | .0    | .0  | 1.4  | .0  | .1   | 1.8   | 1.1   | *     | .0  | 2.9  |
| 10-11   | .0  | .0   | .3    | .2    | .0    | .0  | .5   | .0  | .0   | .5    | .6    | *     | .0  | 1.2  |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .0    | .1    | .1    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 12.1 | 22.2  | 3.0   | .0    | .0  | 37.9 | .3  | 8.2  | 32.1  | 7.6   | .2    | .0  | 48.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | *   | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .1  | .3   | .2    | .0    | .0    | .0  | .5  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .2   | .1    | *     | .0    | .0  | .3  | .0  | .1   | .1    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | .5   | .8    | *     | .0    | .0  | 1.6 | .1  | .2   | .1    | .0    | .0    | .0  | .4  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |       |       | PCT | 1-3 | 4-10 | 11-21 | SW |    |    | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-------|-------|-----|-----|------|-------|----|----|----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 22-33 | 34-47 |     |     |      |       |    |    |    |     |     |
| <1      | *   | .2   | .0    | .0    | .0    | .0    | .2    | .1  | .4  | .0   | .0    | .0 | .0 | .0 | .5  |     |
| 1-2     | *   | .1   | *     | .0    | .0    | .0    | .2    | .1  | +   | *    | .0    | .0 | .0 | .0 | .6  |     |
| 3-4     | .0  | *    | .2    | .0    | .0    | .0    | .2    | .0  | .1  | .2   | .0    | .0 | .0 | .0 | .2  |     |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0    | .1    | .0  | *   | .2   | .0    | .0 | .0 | .0 | .2  |     |
| 7       | .0  | .1   | *     | .0    | .0    | .0    | .1    | .0  | *   | *    | .0    | .0 | .0 | .0 | .1  |     |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0    | *     | .0  | .0  | *    | .0    | .0 | .0 | .0 | *   |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  |     |
| TOT PCT | .1  | .5   | .4    | .0    | .0    | .0    | .9    | .2  | .9  | .4   | .0    | .0 | .0 | .0 | 1.5 |     |

| HGT     | W   |      |       |       |       |       |       | PCT | 1-3 | 4-10 | 11-21 | NW |    |    | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-------|-------|-----|-----|------|-------|----|----|----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 22-33 | 34-47 |     |     |      |       |    |    |    |     |      |           |
| <1      | .1  | .1   | .0    | .0    | .0    | .0    | .2    | .3  | 1.0 | .0   | .0    | .0 | .0 | .0 | .0  | 1.3  |           |
| 1-2     | .2  | 1.0  | .1    | .0    | .0    | .0    | 1.3   | .1  | 2.4 | .5   | .0    | .0 | .0 | .0 | .0  | 3.1  |           |
| 3-4     | .0  | .2   | .3    | *     | .0    | .0    | .5    | *   | .7  | .4   | .0    | .0 | .0 | .0 | .0  | 1.1  |           |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0    | .2    | .0  | *   | .3   | .0    | .0 | .0 | .0 | .0  | .3   |           |
| 7       | .0  | .0   | *     | .0    | .0    | .0    | *     | .0  | .1  | *    | .0    | .0 | .0 | .0 | .0  | .1   |           |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0    | *     | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0    | .0    | .0  | .0  | .0   | .0    | .0 | .0 | .0 | .0  | .0   |           |
| TOT PCT | .3  | 1.3  | .6    | *     | .0    | .0    | 2.2   | .5  | 4.3 | 1.3  | .0    | .0 | .0 | .0 | .0  | 92.8 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT DBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.5 | 4.2  | .2    | .0    | .0    | .0  | 7.0   |         |
| 1-2     | 1.1 | 14.5 | 8.2   | .0    | .0    | .0  | 23.9  |         |
| 3-4     | *   | 7.2  | 19.3  | 1.0   | .0    | .0  | 27.5  |         |
| 5-6     | .0  | 1.6  | 17.8  | 2.9   | *     | .0  | 22.3  |         |
| 7       | .0  | .4   | 8.5   | 3.6   | .1    | .0  | 12.5  |         |
| 8-9     | .0  | .1   | 2.6   | 1.7   | *     | .0  | 4.4   |         |
| 10-11   | .0  | .0   | .9    | .9    | *     | .0  | 1.7   |         |
| 12      | .0  | .0   | .1    | .2    | .1    | .0  | .4    |         |
| 13-16   | .0  | .0   | *     | .2    | .0    | .0  | .2    |         |
| 17-19   | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 3.7 | 28.0 | 57.5  | 10.6  | .2    | .0  | 100.0 | 3629    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.3 | 7.2  | 10.9 | 7.3  | 3.7  | 1.3 | .5    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1418  | 4        |
| 6-7          | .0  | 1.3  | 6.0  | 8.7  | 6.7  | 3.1 | 1.4   | .4  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1229  | 6        |
| 8-9          | *   | .3   | 2.0  | 3.3  | 3.8  | 2.0 | 1.2   | .3  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 578   | 6        |
| 10-11        | .0  | .6   | .7   | 1.0  | .9   | .8  | .6    | .2  | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 217   | 6        |
| 12-13        | .0  | .0   | .7   | .3   | .5   | .3  | .2    | *   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 95    | 6        |
| >13          | .0  | .0   | .0   | .1   | *    | .1  | *     | .2  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 21    | 10       |
| INDET        | 1.6 | 3.9  | 4.3  | 4.0  | 2.6  | 1.5 | .7    | .2  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 836   | 4        |
| TOTAL        | 128 | 587  | 1077 | 1084 | 799  | 398 | 210   | 64  | 40    | 5     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4394  | 5        |
| PCT          | 2.9 | 13.4 | 24.5 | 24.7 | 18.2 | 9.1 | 6.9   | 1.5 | .9    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FUG WD PCPN | FUG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | *    | .1        | .0   | .0        | .0   | .0              | .0   | .1              | .1             | .3                      | 4.7         | .0                  | 4.0        | .8              | 90.2       |  |
| NE                 | *    | .1        | .0   | .0        | .0   | .0              | .0   | .1              | .1             | .4                      | 3.1         | .0                  | 3.1        | .7              | 92.5       |  |
| E                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .8             | .8                      | 1.3         | .0                  | 3.5        | .0              | 93.7       |  |
| SE                 | 3.4  | .0        | .0   | .0        | .0   | .0              | .0   | 3.4             | .0             | .0                      | 10.3        | .0                  | .0         | .0              | 86.2       |  |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 4.2         | 2.4                 | .0         | .0              | 93.4       |  |
| SW                 | .5   | .0        | 2.1  | .0        | .0   | .0              | .0   | 2.6             | .0             | .0                      | 2.6         | .0                  | 4.1        | .0              | 90.7       |  |
| W                  | .9   | .0        | .0   | .0        | .0   | .0              | .0   | .9              | 1.2            | .0                      | .0          | .0                  | .0         | .0              | 97.9       |  |
| NW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .3                      | 3.7         | .0                  | 1.1        | .5              | 94.4       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 7.1         | .0                  | .0         | .0              | 92.9       |  |
| TOT PCT            | .1   | *         | .1   | .0        | .0   | .0              | .0   | .2              | .1             | .3                      | 3.7         | *                   | 3.3        | .7              | 91.7       |  |
| TOT OBS:           | 6338 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                    |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|--------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FUG WD<br>PCPN | FUG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG<br>WEA |
| 00003         | .1                 | .0           | .1   | .0           | .0   | .0                    | .0   | .1                      | .2                | .6           | 2.9            | .1                        | 2.5           | .7                 | 92.9             |
| 06009         | .1                 | .1           | .1   | .0           | .0   | .0                    | .0   | .1                      | .0                | .7           | 3.9            | .0                        | 2.5           | .5                 | 92.3             |
| 12015         | .1                 | .1           | .0   | .0           | .0   | .0                    | .0   | .2                      | .1                | .0           | 3.7            | .0                        | 4.1           | .6                 | 91.3             |
| 18021         | .0                 | .0           | .1   | .0           | .0   | .0                    | .0   | .1                      | .1                | .0           | 4.4            | .0                        | 4.3           | .9                 | 90.2             |
| TOT PCT       | .1                 | *            | .1   | .0           | .0   | .0                    | .0   | .2                      | .1                | .3           | 3.7            | *                         | 3.3           | .7                 | 91.7             |
| TOT OBS:      | 6451               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                    |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .9                 | 12.4 | 17.2  | 2.4   | .1    | .0  |       | 33.0      | 12.7     |          | 37.2       | 40.1  | 32.3  | 25.8  | 29.8  | 39.9  | 35.2  | 33.4  |
| NE       | .7                 | 15.7 | 34.8  | 6.5   | .2    | .0  |       | 57.9      | 14.3     |          | 53.6       | 50.7  | 58.4  | 64.7  | 60.6  | 51.8  | 55.8  | 59.2  |
| E        | .2                 | 1.4  | 1.4   | .2    | *     | .0  |       | 3.2       | 11.6     |          | 2.7        | .5    | 3.2   | 4.9   | 3.9   | .5    | 2.6   | 2.5   |
| SE       | *                  | .3   | .1    | *     | .0    | .0  |       | .4        | 8.6      |          | .4         | .7    | .4    | .5    | .5    | .0    | .3    | .4    |
| S        | .1                 | .2   | .1    | *     | .0    | .0  |       | .4        | 8.9      |          | .5         | .0    | .3    | .3    | .5    | 1.0   | .5    | .1    |
| SW       | .1                 | .3   | .1    | *     | .0    | .0  |       | .6        | 7.2      |          | .6         | .7    | .6    | .4    | .5    | 1.0   | .8    | .3    |
| W        | .2                 | .7   | .2    | *     | .0    | .0  |       | 1.1       | 6.9      |          | 1.3        | 2.4   | .9    | 1.0   | 1.1   | 1.8   | 1.1   | .5    |
| NW       | .3                 | 1.7  | .4    | *     | .0    | .0  |       | 2.5       | 7.6      |          | 2.5        | 2.9   | 2.6   | 1.7   | 2.1   | 2.8   | 2.9   | 2.6   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |       |     |       | 1.0       | .0       |          | 1.2        | 2.1   | 1.3   | .6    | 1.1   | 1.3   | .8    | .9    |
| TOT OBS  | 427                | 3986 | 6618  | 1122  | 32    | 0   | 12185 |           | 13.2     |          | 2341       | 146   | 2322  | 1197  | 2477  | 154   | 2429  | 1119  |
| TOT PCT  | 3.5                | 32.7 | 54.3  | 9.2   | .3    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |           |          |          | 00         | 03    | 06    | 18    |
| N        | 4.7                | 19.8 | 8.0   | .4    | *         | 33.0     | 12.7     | 37.4       | 30.1  | 30.4  | 34.6  |
| NE       | 4.6                | 31.8 | 20.3  | 1.1   | *         | 57.9     | 14.3     | 53.4       | 60.5  | 60.0  | 56.9  |
| E        | .8                 | 1.6  | .7    | *     | .0        | 3.2      | 11.6     | 2.6        | 3.8   | 3.7   | 2.6   |
| SE       | .2                 | .2   | *     | .0    | .0        | .4       | 8.6      | .4         | .4    | .4    | .3    |
| S        | .2                 | .2   | *     | .0    | .0        | .4       | 8.9      | .5         | .3    | .5    | .4    |
| SW       | .3                 | .3   | *     | .0    | .0        | .6       | 7.2      | .6         | .6    | .5    | .6    |
| W        | .6                 | .4   | *     | .0    | .0        | 1.1      | 6.9      | 1.4        | .9    | 1.1   | .9    |
| NW       | 1.2                | 1.2  | .1    | *     | .0        | 2.5      | 7.6      | 2.5        | 2.3   | 2.2   | 2.8   |
| VAR      | 1.0                | .0   | .0    | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |           | 1.0      | .0       | 1.2        | 1.1   | 1.1   | .8    |
| TOT OBS  | 1066               | 6754 | 3565  | 197   | 3         | 12185    |          | 2487       | 3519  | 2631  | 3548  |
| TOT PCT  | 13.7               | 55.4 | 29.3  | 1.6   | *         | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|--------------------|------|-------|-------|-------|-----|------|----------|-----------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |          |           |
| 00003 | 1.2  | 2.5                | 33.1 | 53.4  | 9.5   | .2    | .0  | 13.2 | 100.0    | 2487      |
| 06009 | 1.1  | 2.5                | 33.4 | 53.8  | 8.9   | .4    | .0  | 13.1 | 100.0    | 3519      |
| 12015 | 1.1  | 2.3                | 31.0 | 55.1  | 10.3  | .2    | .0  | 13.5 | 100.0    | 2631      |
| 18021 | .8   | 2.5                | 33.1 | 54.9  | 8.5   | .2    | .0  | 13.1 | 100.0    | 3548      |
| TOT   | 127  | 300                | 3986 | 6618  | 1122  | 32    | 0   | 13.2 |          | 12185     |
| PCT   | 1.0  | 2.5                | 32.7 | 54.3  | 9.2   | .3    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 6 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-------|-----------|------------------|
|          |      |      |      |       |           |                  |
| N        | 22.2 | 5.8  | 6.8  | 5.1   |           | 2.8              |
| NE       | 23.1 | 7.8  | 12.1 | 7.4   |           | 3.5              |
| E        | .7   | .2   | .5   | .4    |           | 4.0              |
| SE       | .1   | .1   | .1   | .2    |           | 5.1              |
| S        | .3   | .1   | .1   | .1    |           | 3.0              |
| SW       | .3   | .3   | .3   | *     |           | 3.7              |
| W        | .0   | .4   | .4   | *     |           | 3.3              |
| NW       | 1.8  | .7   | .6   | .2    |           | 2.7              |
| VAR      | .0   | .0   | .0   | .0    |           | .0               |
| CALM     | .8   | .3   | .2   | .1    |           | 2.4              |
| TOT OBS  | 2553 | 806  | 1071 | 689   | 5119      | 3.2              |
| TOT PCT  | 49.9 | 15.7 | 20.9 | 13.5  | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|----------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT  | OBS   |
| N       | .1  | .0  | .1  | 1.5 | 3.6  | 2.8  | 1.1  | .3   | .2   | .4    | 29.8     |       |
| NE      | .1  | *   | .3  | 2.3 | 6.1  | 4.0  | 2.0  | .7   | .2   | .8    | 33.9     |       |
| E       | .0  | .0  | .0  | *   | .3   | .2   | .1   | *    | *    | *     | 1.0      |       |
| SE      | *   | .0  | .0  | *   | *    | .1   | *    | .0   | .0   | *     | .2       |       |
| S       | *   | .0  | .0  | *   | .1   | .0   | .0   | *    | .0   | .0    | .5       |       |
| SW      | .0  | *   | .0  | *   | *    | .1   | .0   | .0   | .0   | *     | .7       |       |
| W       | .0  | .0  | .0  | *   | .1   | .1   | *    | *    | .0   | *     | 1.2      |       |
| NW      | .1  | .0  | .0  | .1  | .2   | .1   | .1   | .0   | *    | *     | 2.7      |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0       |       |
| CALM    | *   | .0  | .0  | *   | *    | .1   | .0   | .0   | *    | *     | 1.3      |       |
| TOT OBS | 16  | 2   | 19  | 203 | 532  | 378  | 168  | 52   | 28   | 70    | 3651     | 5119  |
| TOT PCT | .3  | *   | .4  | 4.0 | 10.4 | 7.4  | 3.3  | 1.0  | .5   | 1.4   | 71.3     | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |  |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|--|
|                   | ■ OR<br>>10 | ■ OR<br>>5 | ■ OR<br>>2 | ■ OR<br>>1 | ■ OR<br>>1/2 | ■ OR<br>>1/4 | ■ OR<br>>50YD | ■ OR<br>>0 |  |
| ■ OR >6500        | 1.1         | 1.9        | 1.9        | 2.0        | 2.0          | 2.0          | 2.0           | 2.0        |  |
| ■ OR >5000        | 1.8         | 2.8        | 2.9        | 3.0        | 3.0          | 3.0          | 3.0           | 3.0        |  |
| ■ OR >3500        | 4.2         | 6.0        | 6.2        | 6.2        | 6.2          | 6.2          | 6.2           | 6.2        |  |
| ■ OR >2000        | 9.4         | 12.8       | 13.5       | 13.5       | 13.5         | 13.5         | 13.5          | 13.5       |  |
| ■ OR >1000        | 16.2        | 22.7       | 23.8       | 23.9       | 23.9         | 23.9         | 23.9          | 23.9       |  |
| ■ OR >600         | 18.6        | 26.5       | 27.8       | 27.8       | 27.9         | 27.9         | 27.9          | 27.9       |  |
| ■ OR >300         | 18.7        | 26.8       | 28.2       | 28.2       | 28.2         | 28.2         | 28.2          | 28.2       |  |
| ■ OR >150         | 18.7        | 26.8       | 28.2       | 28.2       | 28.3         | 28.3         | 28.3          | 28.3       |  |
| ■ OR > 0          | 18.7        | 27.0       | 28.4       | 28.4       | 28.5         | 28.5         | 28.6          | 28.6       |  |
| TOTAL             | 972         | 1398       | 1471       | 1475       | 1476         | 1480         | 1483          | 1483       |  |

TOTAL NUMBER OF OBS: 5186

PCT FREQ NH < 5/8: 71.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8    | OBSCD | TOTAL OBS |
|------|------|------|-----|-----|-----|-----|-----|------|-------|-----------|
| 31.3 | 13.9 | 11.0 | 8.5 | 5.9 | 4.3 | 5.9 | 7.3 | 11.6 | .3    | 5435      |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | *    | *    | .0  | .0 | *  | .0 | .0  | *   | .0  | *    | .1    | .1           |
|              | TOT %  | *    | *    | .0  | .0 | *  | .0 | .0  | *   | .0  | *    | .1    | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .4   | .3   | .0  | *  | .0 | .0 | .0  | *   | .0  | .0   | .7    | .7           |
|              | TOT %  | .4   | .3   | .0  | *  | .0 | .0 | .0  | *   | .0  | .0   | .7    | .7           |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .2   | .1   | *   | .0 | *  | .0 | .0  | *   | .0  | .0   | .4    | .4           |
|              | TOT %  | .2   | .1   | *   | .0 | *  | .0 | .0  | *   | .0  | .0   | .4    | .4           |
| 2<5          | PCP    | *    | *    | .0  | *  | .0 | .0 | .0  | .0  | .0  | .0   | *     | *            |
|              | NO PCP | 1.7  | .9   | *   | *  | *  | *  | *   | .1  | .0  | .1   | 2.9   | 2.9          |
|              | TOT %  | 1.8  | .9   | *   | *  | *  | *  | *   | .1  | .0  | .1   | 2.9   | 2.9          |
| 5<10         | PCP    | *    | *    | .0  | .0 | .0 | *  | .0  | .0  | .0  | .0   | .1    | .1           |
|              | NO PCP | 11.1 | 16.1 | .8  | .2 | .2 | .1 | .1  | .7  | .0  | .2   | 29.5  | 29.5         |
|              | TOT %  | 11.1 | 16.2 | .8  | .2 | .2 | .1 | .1  | .7  | .0  | .2   | 29.5  | 29.5         |
| 10+          | PCP    | *    | *    | .0  | .0 | .0 | *  | *   | .0  | .0  | .0   | .1    | .1           |
|              | NO PCP | 25.5 | 33.8 | 1.3 | .2 | .4 | .6 | 1.2 | 2.2 | .0  | 1.0  | 66.3  | 66.3         |
|              | TOT %  | 25.5 | 33.8 | 1.3 | .2 | .4 | .6 | 1.2 | 2.2 | .0  | 1.0  | 66.3  | 66.3         |
| TOT OBS      |        | 6330 |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |        | 39.0 | 51.3 | 2.1 | .5 | .7 | .8 | 1.3 | 3.1 | .0  | 1.3  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0  | *   | .0  | *    | *     | *            |
|              | 4-10       | *    | *    | .0  | .0 | *  | .0 | .0  | *   | .0  |      | .1    | .1           |
|              | 11-21      | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  |      | .0    | .0           |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  |      | *     | *            |
|              | TOT %      | *    | *    | .0  | .0 | *  | .0 | .0  | *   | .0  | *    | .1    | .1           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0 | .0  | *   | .0  |      | .1    | .1           |
|              | 11-21      | .2   | .2   | .0  | *  | .0 | .0 | .0  | .0  | .0  |      | .4    | .4           |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  |      | .1    | .1           |
|              | TOT %      | .3   | .2   | .0  | *  | .0 | .0 | .0  | *   | .0  | .0   | .5    | .5           |
| 1<2          | 0-3        | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     | *            |
|              | 4-10       | .1   | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  |      | .1    | .1           |
|              | 11-21      | .1   | .1   | .0  | .0 | *  | .0 | .0  | *   | .0  |      | .1    | .1           |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  |      | *     | *            |
|              | TOT %      | .2   | .1   | *   | .0 | *  | .0 | .0  | *   | .0  | .0   | .3    | .3           |
| 2<5          | 0-3        | .1   | *    | .0  | .0 | .0 | .0 | *   | .0  | .0  | .1   | .1    | .1           |
|              | 4-10       | .4   | .2   | *   | *  | *  | *  | *   | *   | .0  |      | .7    | .7           |
|              | 11-21      | .9   | .5   | *   | .0 | *  | *  | .0  | *   | .0  |      | 1.5   | 1.5          |
|              | 22+        | .1   | .3   | *   | .0 | .0 | .0 | .0  | .0  | .0  |      | .4    | .4           |
|              | TOT %      | 1.4  | 1.0  | *   | *  | *  | *  | .0  | .1  | .0  | .1   | 2.7   | 2.7          |
| 5<10         | 0-3        | .1   | .2   | *   | *  | *  | *  | *   | *   | .0  | .2   | .6    | .6           |
|              | 4-10       | 3.0  | 3.2  | .4  | .1 | *  | *  | .1  | .4  | .0  |      | 7.2   | 7.2          |
|              | 11-21      | 5.6  | 9.5  | .2  | *  | .0 | .0 | *   | .2  | .0  |      | 15.6  | 15.6         |
|              | 22+        | 1.1  | 2.4  | .1  | *  | *  | *  | .0  | *   | .0  |      | 3.6   | 3.6          |
|              | TOT %      | 9.8  | 15.4 | .7  | .2 | .1 | .1 | .1  | .6  | .0  | .2   | 27.0  | 27.0         |
| 10+          | 0-3        | .6   | .4   | .1  | *  | *  | .1 | .1  | .2  | .0  | .9   | 2.4   | 2.4          |
|              | 4-10       | 9.4  | 10.2 | .7  | .2 | .2 | .3 | .7  | 1.5 | .0  |      | 23.2  | 23.2         |
|              | 11-21      | 12.6 | 24.4 | .8  | .1 | .1 | .1 | .2  | .3  | .0  |      | 38.5  | 38.5         |
|              | 22+        | 1.3  | 3.8  | .1  | .0 | .0 | .0 | .0  | *   | .0  |      | 5.1   | 5.1          |
|              | TOT %      | 23.9 | 38.8 | 1.6 | .3 | .3 | .5 | 1.0 | 2.0 | .0  | .9   | 69.3  | 69.3         |
| TOT OBS      |            | 8783 |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |            | 35.7 | 55.5 | 2.4 | .4 | .5 | .6 | 1.1 | 2.6 | .0  | 1.1  | 100.0 |              |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HRUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .2         | .0         | .3         | 2.9        | 6.4          | 4.6          | 1.8          | 1.0          | .5           | 1.6   | 19.4  | 80.6                | 1291         |
| 06009         | .2         | .1         | .7         | 7.4        | 19.0         | 12.4         | 5.5          | 1.1          | .6           | 1.4   | 48.4  | 51.6                | 1266         |
| 12015         | .5         | .0         | .3         | 3.9        | 10.9         | 9.2          | 3.7          | 1.2          | .9           | 1.7   | 32.3  | 67.7                | 1413         |
| 18021         | .3         | .1         | .1         | 1.5        | 4.4          | 2.5          | 1.9          | .6           | .2           | .8    | 12.5  | 87.5                | 1353         |
| TOT           | 16         | 2          | 19         | 207        | 538          | 381          | 170          | 92           | 29           | 74    | 1488  | 3835                | 5323         |
| PCT           | .3         | *          | .4         | 3.9        | 10.1         | 7.2          | 3.2          | 1.0          | .5           | 1.4   | 28.0  | 72.0                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HRUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .4    | .1  | 2.8 | 24.6 | 72.1 | 1978         |
| 06009         | .1   | .7    | .2  | 2.2 | 30.5 | 66.3 | 2394         |
| 12015         | .2   | .4    | .5  | 3.3 | 24.7 | 70.9 | 2069         |
| 18021         | .1   | .7    | .5  | 2.5 | 27.8 | 68.5 | 2454         |
| TOT           | 9    | 48    | 29  | 236 | 2409 | 6164 | 8895         |
| PCT           | .1   | .5    | .3  | 2.7 | 27.1 | 69.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HRUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .2            | .5         | 6.4         | 15.4            | 78.2               | 1243         |
| 06009         | .2            | 1.1        | 11.2        | 39.1            | 49.7               | 1242         |
| 12015         | .5            | .9         | 7.9         | 26.8            | 65.4               | 1375         |
| 18021         | .3            | .6         | 5.1         | 10.0            | 84.8               | 1326         |
| TOT           | 16            | 40         | 394         | 1179            | 3613               | 5186         |
| PCT           | .3            | .8         | 7.6         | 22.7            | 69.7               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | *     | *     | .1    | *     | *     | *      | 14           | .3          |
| 75/79  | .0   | .0    | .1    | 1.1   | 1.7   | .5    | .2    | .2     | 187          | 3.7         |
| 70/74  | .0   | .0    | *     | .2    | 3.4   | 15.3  | 12.8  | 3.8    | 1817         | 35.6        |
| 65/69  | .0   | .0    | .0    | .1    | 1.5   | 12.7  | 31.6  | 12.5   | 2981         | 58.3        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .2    | .9    | 1.1    | 111          | 2.2         |
| TOT    | 0    | 0     | 6     | 20    | 312   | 1530  | 2343  | 900    | 5111         | 100.0       |
| PCT    | .0   | .0    | .1    | .4    | 6.1   | 29.9  | 45.8  | 17.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM |
|------|------|-----|----|----|----|-----|-----|-----|------|
| .0   | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| .1   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 1.3  | 1.8  | .2  | *  | *  | .1 | .1  | .1  | .0  | .1   |
| 13.6 | 17.7 | .7  | .1 | .2 | .4 | .8  | 1.4 | .0  | .5   |
| 22.5 | 31.6 | 1.0 | .2 | .1 | .3 | .6  | 1.3 | .0  | .7   |
| 1.1  | .9   | *   | *  | *  | *  | .0  | *   | .0  | *    |
| 38.6 | 52.2 | 1.9 | .3 | .4 | .9 | 1.5 | 2.9 | .0  | 1.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HRUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 81  | 73  | 72  | 68  | 65 | 63 | 50  | 68.1 | 2510         |
| 06009         | 81  | 75  | 72  | 68  | 64 | 63 | 52  | 68.1 | 3512         |
| 12015         | 85  | 80  | 76  | 71  | 67 | 64 | 58  | 71.0 | 2573         |
| 18021         | 87  | 80  | 76  | 70  | 66 | 64 | 55  | 70.6 | 3464         |
| TOT           | 87  | 78  | 75  | 69  | 65 | 63 | 50  | 69.5 | 12059        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .2    | 1.7   | 18.9  | 52.5  | 26.8   | 85   | 1254         |
| 06009         | .0   | .1    | 2.8   | 20.8  | 50.5  | 25.9   | 84   | 1292         |
| 12015         | .0   | 1.4   | 12.1  | 42.4  | 36.3  | 7.9    | 78   | 1311         |
| 18021         | .0   | .4    | 8.0   | 37.0  | 44.1  | 10.5   | 80   | 1332         |
| TOT           | 0    | 26    | 322   | 1555  | 2373  | 913    | 82   | 5189         |



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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | M<br>FOG | W0<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .1       | .0       | *        | 6     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .0       | 9     | .1       | .1        |
| 11/13              | .0       | .0       | .0       | *        | .1       | .1       | .2       | .2       | .2       | *        | 42    | *        | .7        |
| 9/10               | .0       | .0       | .0       | .0       | *        | .1       | .3       | .5       | .1       | .0       | 59    | *        | 1.0       |
| 7/8                | .0       | .0       | .0       | .1       | .1       | .5       | 1.1      | .4       | .1       | .0       | 124   | .2       | 2.0       |
| 6                  | .0       | .0       | *        | .0       | .2       | .6       | .8       | .2       | *        | .0       | 103   | .1       | 1.7       |
| 5                  | .0       | .0       | .0       | *        | .4       | 1.6      | 1.4      | .2       | .0       | .0       | 202   | .1       | 3.4       |
| 4                  | .0       | .0       | .1       | .1       | .9       | 2.9      | 1.6      | .1       | *        | .0       | 331   | .3       | 5.6       |
| 3                  | .0       | .0       | .0       | .1       | 1.6      | 3.8      | 1.4      | *        | .0       | .0       | 388   | .4       | 6.4       |
| 2                  | .0       | .1       | .0       | .3       | 3.5      | 6.2      | 1.2      | .0       | *        | .0       | 642   | .5       | 10.9      |
| 1                  | .0       | .0       | .0       | .3       | 7.4      | 9.2      | .8       | .0       | .0       | .0       | 999   | .7       | 16.9      |
| 0                  | .0       | .0       | .0       | .6       | 9.9      | 10.2     | .4       | .0       | *        | .0       | 1200  | .8       | 20.4      |
| -1                 | .0       | .0       | .0       | .4       | 8.0      | 6.6      | .1       | *        | .0       | .0       | 856   | .4       | 14.7      |
| -2                 | .0       | .0       | *        | .4       | 4.2      | 2.0      | .1       | .0       | .0       | .0       | 376   | .2       | 6.4       |
| -3                 | .0       | .0       | *        | .2       | 1.7      | 1.0      | *        | .0       | .0       | .0       | 164   | .1       | 2.8       |
| -4                 | *        | .0       | .0       | .4       | .9       | .3       | *        | .0       | .0       | .0       | 94    | .1       | 1.6       |
| -5                 | .0       | .0       | .0       | .2       | .3       | .3       | *        | .0       | .0       | .0       | 45    | *        | .8        |
| -6                 | .0       | .0       | .0       | .1       | .2       | .1       | *        | .0       | .0       | .0       | 19    | *        | .3        |
| -7/-8              | .0       | .0       | .0       | .1       | .2       | *        | .0       | .0       | .0       | .0       | 13    | .0       | .2        |
| -9/-10             | .0       | .0       | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | 2     | *        | *         |
| -11/-13            | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| -14/-16            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 2        | 3        | 12       | 174      | 2246     | 2575     | 539      | 97       | 25       | 3        | 5676  | 218      | 5458      |
| PCT                | *        | .1       | .2       | 3.1      | 39.6     | 45.4     | 9.5      | 1.7      | .4       | .1       | 100.0 | 3.8      | 96.2      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE   |      |       |       |       |     |    | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|------|-------|-------|-------|-----|----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |      |
| <1      | .4  | 1.7  | .1    | .0    | .0    | .0  | 2.2  | .0  | .2   | .8   | .1    | .0    | .0    | .0  | .0 | 1.1  |
| 1-2     | .3  | 7.3  | 3.1   | .0    | .0    | .0  | 10.8 | .0  | .1   | 5.3  | 4.9   | .0    | .0    | .0  | .0 | 10.3 |
| 3-4     | .0  | 3.9  | 9.6   | .5    | .0    | .0  | 14.0 | .0  | .1   | 3.2  | 11.3  | 1.0   | .0    | .0  | .0 | 15.5 |
| 5-6     | .0  | .6   | 6.1   | .6    | .0    | .0  | 7.3  | .0  | .0   | .7   | 9.6   | 1.7   | *     | .0  | .0 | 12.0 |
| 7       | .0  | .1   | 2.8   | .8    | *     | .0  | 3.8  | .0  | .0   | .1   | 5.0   | 1.7   | *     | .0  | .0 | 6.8  |
| 8-9     | .0  | .1   | 1.3   | .5    | .0    | .0  | 1.8  | .0  | .0   | .1   | 1.7   | 1.0   | .0    | .0  | .0 | 2.8  |
| 10-11   | .0  | .0   | .0    | .2    | .0    | .0  | .5   | .0  | .0   | .0   | .5    | .5    | .0    | .0  | .0 | 1.1  |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0   | .0    | .2    | *     | .0  | .0 | .3   |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | .1   | .0  | .0   | .0   | .0    | .0    | *     | .0  | .0 | *    |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| TOT PCT | .8  | 13.7 | 23.1  | 2.8   | *     | .0  | 40.4 | .4  | 10.2 | 33.1 | 6.1   | .1    | .1    | .0  | .0 | 49.9 |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .0  | .2   | *     | .0    | .0    | .0  | .2  | .0  | *   | *    | .0    | .0    | .0    | .0  | .0 | .1  |
| 1-2     | .0  | .2   | .2    | .0    | .0    | .0  | .4  | .0  | *   | .2   | .0    | .0    | .0    | .0  | .0 | .2  |
| 3-4     | .0  | .1   | .3    | .0    | .0    | .0  | .5  | .0  | .0  | .0   | *     | .0    | .0    | .0  | .0 | *   |
| 5-6     | .0  | *    | .2    | .1    | .0    | .0  | .3  | .0  | .0  | .0   | *     | .0    | .0    | .0  | .0 | *   |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0  | .0   | .0    | *     | .0    | .0  | .0 | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .0  | .6   | .6    | .1    | .0    | .0  | 1.4 | .1  | .2  | .1   | *     | .0    | .0    | .0  | .0 | .4  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | *   | .1   | .0    | .0    | .0    | .0  | .1  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |     |
| 1-2     | .1  | .3   | .1    | .0    | .0    | .0  | .5  | *   | .4   | .1    | .0    | .0    | .0  | .5  |     |
| 3-4     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |     |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | *    | .1    | .0    | .0    | .0  | .1  |     |
| 7       | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| TOT PCT | .1  | .4   | .3    | .1    | .0    | .0  | .8  | .1  | .6   | .2    | *     | .0    | .0  | 1.0 |     |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .1  | .1   | *     | .0    | .0    | .0  | .2  | .2  | .3   | *     | .0    | .0    | .0  | .5  |      |           |
| 1-2     | .0  | .6   | .2    | .0    | .0    | .0  | .8  | .1  | 1.1  | .2    | .0    | .0    | .0  | 1.3 |      |           |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | .5   | .3    | .0    | .0    | .0  | .9  |      |           |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | *     | .0    | .0  | .2  |      |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |      |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |      |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .1  | .9   | .4    | .0    | .0    | .0  | 1.3 | .2  | 2.1  | .7    | *     | .0    | .0  | 3.0 | 98.1 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.2 | 3.5  | .2    | .0    | .0    | .0  | 6.9   |         |
| 1-2     | .8  | 15.4 | 8.6   | .0    | .0    | .0  | 24.7  |         |
| 3-4     | .1  | 7.8  | 21.7  | 1.5   | .0    | .0  | 31.1  |         |
| 5-6     | .0  | 1.6  | 16.1  | 2.3   | *     | .0  | 20.0  |         |
| 7       | .0  | .3   | 7.9   | 2.5   | *     | .0  | 10.7  |         |
| 8-9     | .0  | .2   | 3.0   | 1.4   | .0    | .0  | 4.6   |         |
| 10-11   | .0  | .0   | .7    | 1.8   | .0    | .0  | 1.6   |         |
| 12      | .0  | .0   | .0    | .3    | *     | .0  | .3    |         |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.0 | 28.7 | 58.2  | 9.0   | .1    | .0  | 100.0 | 3452    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| 6-7          | 1.3 | 8.1  | 11.4 | 8.3  | 3.9  | 1.5 | .6    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1459  | 4        |
| 8-9          | *   | .8   | 5.6  | 7.8  | 6.3  | 3.4 | 1.5   | .2  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1064  | 6        |
| 10-11        | .0  | .3   | 1.8  | 3.4  | 3.4  | 1.9 | .7    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 490   | 6        |
| 12-13        | .0  | .5   | .7   | .7   | .8   | .6  | .5    | .2  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 171   | 6        |
| >13          | .0  | .0   | .0   | .3   | .2   | .2  | .2    | *   | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 62    | 5        |
| INDET        | 2.1 | 4.0  | 6.3  | 3.7  | 3.3  | 1.0 | .7    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 880   | 4        |
| TOTAL        | 141 | 565  | 1095 | 1007 | 744  | 355 | 171   | 42  | 19    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4141  | 5        |
| PCT          | 3.4 | 13.6 | 26.4 | 24.3 | 18.0 | 8.6 | 4.1   | 1.0 | .5    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1858-1973

JULY

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24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | *                  | *         | .0   | .0        | .0   | .0              | .0   | .1                      | *              | .2        | 7.8         | .0                  | 12.4       | 1.6             | 77.9       |
| NE       | *                  | *         | .1   | .0        | .0   | .0              | *    | .2                      | *              | .2        | 5.6         | *                   | 8.5        | 1.4             | 84.1       |
| E        | .8                 | .0        | .0   | .0        | .0   | .0              | .0   | .8                      | .0             | .0        | 4.2         | .0                  | 10.3       | 1.1             | 83.6       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 21.2        | .0                  | 18.2       | .0              | 60.6       |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 6.2         | .0                  | 6.2        | 3.1             | 84.5       |
| SW       | .0                 | 1.9       | .0   | .0        | .0   | .0              | .0   | 1.9                     | .0             | 3.8       | 17.0        | 7.5                 | 1.9        | .9              | 67.0       |
| W        | .0                 | 2.3       | .0   | .0        | .0   | .0              | .0   | 2.3                     | .0             | .0        | 9.2         | 9.2                 | 14.9       | .0              | 64.4       |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .3        | 16.7        | .0                  | 11.6       | 1.8             | 68.9       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | 1.8                | .0        | .0   | .0        | .0   | .0              | .0   | 1.8                     | 1.8            | 1.8       | 30.9        | 3.6                 | 9.1        | .0              | 50.9       |
| TOT PCT  | .1                 | *         | .1   | .0        | .0   | .0              | *    | .2                      | *              | .2        | 7.1         | .1                  | 10.3       | 1.5             | 80.7       |
| TOT OBS: | 6817               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .3        | 5.8         | .1                  | 9.1        | 1.6             | 82.7       |
| 08009      | .2                 | .1        | .2   | .0        | .0   | .0              | .0   | .5                      | .0             | .2        | 7.1         | .2                  | 7.3        | 1.2             | 83.6       |
| 12015      | .1                 | .0        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .0        | 7.9         | .1                  | 11.5       | 1.5             | 78.9       |
| 18021      | .0                 | .0        | .0   | .0        | .0   | .0              | .1   | .1                      | .1             | .2        | 7.9         | .0                  | 13.0       | 1.7             | 77.2       |
| TOT PCT    | .1                 | *         | .1   | .0        | .0   | .0              | *    | .2                      | *              | .2        | 7.2         | .1                  | 10.2       | 1.5             | 80.5       |
| TOT OBS:   | 6891               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .5                 | 8.7  | 22.2  | 4.6   | .1    | .0  |       | 36.1      | 14.7     |          | 39.5       | 45.7  | 34.8  | 28.5  | 33.4  | 45.3  | 39.7  | 35.0  |
| NE       | .3                 | 10.0 | 38.0  | 9.7   | .1    | .0  |       | 58.1      | 15.9     |          | 54.5       | 50.8  | 58.4  | 64.9  | 60.5  | 52.0  | 55.4  | 60.3  |
| E        | *                  | .8   | 1.2   | .2    | *     | .0  |       | 2.2       | 13.3     |          | 1.8        | 1.6   | 2.8   | 3.8   | 2.3   | 1.1   | 1.4   | 2.1   |
| SE       | *                  | .1   | .1    | *     | .0    | .0  |       | .2        | 12.3     |          | .3         | 1.3   | .4    | .1    | .1    | .0    | .1    | *     |
| S        | .1                 | .1   | .1    | *     | .0    | .0  |       | .3        | 10.5     |          | .4         | .0    | .3    | .2    | .2    | .0    | .3    | .1    |
| SW       | *                  | .2   | .1    | *     | .0    | .0  |       | .2        | 9.5      |          | .4         | .0    | .1    | .2    | .4    | .0    | .2    | *     |
| W        | .1                 | .2   | *     | *     | .0    | .0  |       | .3        | 5.7      |          | .3         | .0    | .4    | .2    | .2    | .0    | .2    | .4    |
| NW       | .2                 | 1.0  | .6    | .1    | .0    | .0  |       | 1.8       | 9.8      |          | 2.0        | .6    | 2.1   | 1.4   | 1.9   | .3    | 2.0   | 1.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .7                 |      |       |       |       |     |       | .7        | .0       |          | .8         | .0    | .6    | .6    | 1.0   | 1.3   | .7    | .6    |
| TOT OBS  | 252                | 2676 | 7934  | 1871  | 28    | 0   | 12761 |           | 15.2     |          | 2499       | 158   | 2452  | 1164  | 2654  | 160   | 2544  | 1130  |
| TOT PCT  | 2.0                | 21.0 | 62.2  | 14.7  | .2    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 2.7                | 19.2 | 13.4  | .8    | *   |       |  | 36.1      | 14.7     |          | 39.9       | 32.8  | 34.0  | 38.2  |    |
| NE       | 2.3                | 27.2 | 26.8  | 1.8   | *   |       |  | 58.1      | 15.9     |          | 54.3       | 60.5  | 60.0  | 56.9  |    |
| E        | .3                 | 1.2  | .7    | .1    | .0  |       |  | 2.2       | 13.3     |          | 1.8        | 3.1   | 2.2   | 1.6   |    |
| SE       | .1                 | .1   | *     | *     | .0  |       |  | .2        | 12.3     |          | .4         | .3    | .1    | .1    |    |
| S        | .1                 | .1   | .1    | *     | .0  |       |  | .3        | 10.5     |          | .4         | .3    | .2    | .3    |    |
| SW       | .1                 | .1   | *     | *     | .0  |       |  | .2        | 9.5      |          | .4         | .1    | .3    | .2    |    |
| W        | .2                 | *    | *     | .0    | .0  |       |  | .3        | 5.7      |          | .3         | .4    | .2    | .2    |    |
| NW       | .6                 | 1.0  | .2    | *     | .0  |       |  | 1.8       | 9.8      |          | 1.9        | 1.8   | 1.8   | 1.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | .7                 |      |       |       |     |       |  | .7        | .0       |          | .7         | .6    | 1.0   | .7    |    |
| TOT OBS  | 913                | 6245 | 5260  | 340   | 3   | 12761 |  |           | 15.2     |          | 2657       | 3616  | 2814  | 3674  |    |
| TOT PCT  | 7.2                | 48.9 | 41.2  | 2.7   | *   |       |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1858-1973

JULY

AREA 0005 CENTRAL SPANISH SAMARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10  | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|------|-------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |      |       | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | .7   | 1.3  | 20.6  | 61.2               | 15.8  | .3    | .0  | 15.3  | 100.0    | 2657      |
| 06009 | .6   | 1.5  | 22.4  | 62.0               | 13.2  | .3    | .0  | 14.8  | 100.0    | 3616      |
| 12015 | 1.0  | 1.1  | 19.8  | 62.2               | 15.8  | .1    | .0  | 15.3  | 100.0    | 2814      |
| 18021 | .7   | 1.1  | 20.7  | 63.1               | 14.4  | .2    | .0  | 15.2  | 100.0    | 3674      |
| TOT   | .93  | 1.59 | 20.76 | 79.34              | 18.71 | .28   | .0  | 15.2  |          | 12761     |
| PCT   | .7   | 1.2  | 21.0  | 62.2               | 14.7  | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 24.7 | 4.3  | 7.3  | 7.3  |           | 2.9              |
| NE       | 24.3 | 6.0  | 11.7 | 9.1  |           | 3.4              |
| E        | .5   | .2   | .3   | .2   |           | 3.7              |
| SE       | .1   | *    | *    | .1   |           | 5.1              |
| S        | .2   | .1   | .1   | *    |           | 2.8              |
| SW       | .2   | *    | .1   | *    |           | 2.5              |
| W        | .1   | *    | .1   | .1   |           | 5.3              |
| NW       | 1.2  | .1   | .4   | .6   |           | 3.3              |
| VAR      | .0   | .0   | .0   | .0   |           | .0               |
| CALM     | .4   | *    | .1   | .3   |           | 3.9              |
| TOT OBS  | 2880 | 605  | 1113 | 969  | 5587      | 3.2              |
| TOT PCT  | 31.5 | 10.8 | 19.9 | 17.7 | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .2  | .1  | .5  | 1.6 | 3.5  | 3.0  | 1.3  | .4   | .5   | .8    | 31.7    |       |
| NE      | .1  | *   | .5  | 2.2 | 5.9  | 4.5  | 2.0  | .7   | .3   | 1.1   | 33.6    |       |
| E       | .0  | .0  | *   | *   | .1   | .1   | .1   | .0   | .1   | *     | .7      |       |
| SE      | *   | .0  | .0  | .0  | *    | *    | .0   | .0   | .0   | .0    | .1      |       |
| S       | .0  | .0  | .0  | *   | .1   | *    | .0   | .0   | .0   | *     | .3      |       |
| SW      | .0  | .0  | .0  | *   | *    | *    | .0   | .0   | .0   | *     | .3      |       |
| W       | *   | .0  | *   | *   | .1   | .0   | .0   | .0   | .0   | .0    | .1      |       |
| NW      | *   | *   | *   | .2  | .3   | .2   | *    | *    | *    | *     | 1.5     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .1  | .0  | *   | *   | .1   | .1   | *    | .0   | .0   | .0    | .5      |       |
| TOT OBS | 29  | 9   | 59  | 225 | 557  | 436  | 195  | 66   | 47   | 114   | 3850    | 5587  |
| TOT PCT | .5  | .2  | 1.1 | 4.0 | 10.0 | 7.8  | 3.5  | 1.2  | .8   | 2.0   | 68.9    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING (FEET) | VSBY (NH) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .9        | 2.5  | 2.9  | 2.9  | 2.9  | 2.9  | 2.9   | 2.9  |
| >5000          | 1.6       | 3.7  | 4.0  | 4.1  | 4.1  | 4.1  | 4.1   | 4.1  |
| >3500          | 3.7       | 6.8  | 7.5  | 7.5  | 7.5  | 7.5  | 7.6   | 7.6  |
| >2000          | 7.6       | 14.0 | 15.2 | 15.3 | 15.3 | 15.3 | 15.4  | 15.4 |
| >1000          | 12.9      | 23.3 | 25.1 | 25.2 | 25.2 | 25.2 | 25.3  | 25.3 |
| >600           | 14.5      | 26.8 | 29.1 | 29.2 | 29.2 | 29.3 | 29.3  | 29.3 |
| >300           | 14.8      | 27.7 | 30.2 | 30.3 | 30.3 | 30.4 | 30.4  | 30.4 |
| >150           | 14.9      | 27.8 | 30.4 | 30.4 | 30.5 | 30.5 | 30.6  | 30.6 |
| >0             | 14.9      | 28.0 | 30.8 | 30.9 | 30.9 | 31.0 | 31.1  | 31.1 |
| TOTAL          | 829       | 1562 | 1720 | 1724 | 1727 | 1731 | 1733  | 1734 |

TOTAL NUMBER OF OBS: 5581

PCT FREQ NH <5/8: 68.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8    | OBS | TOTAL OBS |
|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----------|
| 40.8 | 8.7 | 7.6 | 5.7 | 5.3 | 4.0 | 6.0 | 7.4 | 14.1 | .5  | 5872      |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1856-1973

JULY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | *    | .0  | .0 | .0 | *  | *  | .0  | .0  | *    | .1    |              |
|              | TOT %  | *    | *    | .0  | .0 | .0 | *  | *  | .0  | .0  | *    | .1    |              |
| 1/2<1        | PCP    | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | .3   | .9   | *   | *  | .0 | .0 | .0 | .1  | .0  | *    | 1.4   |              |
|              | TOT %  | .4   | .9   | *   | *  | .0 | .0 | .0 | .1  | .0  | *    | 1.4   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .6   | .7   | *   | .0 | .0 | *  | .0 | *   | .0  | *    | 1.4   |              |
|              | TOT %  | .6   | .7   | *   | .0 | .0 | *  | .0 | *   | .0  | *    | 1.4   |              |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     |              |
|              | NO PCP | 4.3  | 3.2  | .1  | *  | .1 | .1 | .4 | .0  | .0  | .3   | 8.5   |              |
|              | TOT %  | 4.3  | 3.2  | .1  | *  | .1 | .1 | .4 | .0  | .0  | .3   | 8.5   |              |
| 5<10         | PCP    | *    | .1   | *   | .0 | .0 | *  | *  | *   | .0  | .0   | .1    |              |
|              | NO PCP | 18.9 | 22.1 | .6  | *  | .1 | .1 | .2 | 1.0 | .0  | .3   | 43.4  |              |
|              | TOT %  | 18.9 | 22.2 | .6  | *  | .1 | .1 | .2 | 1.0 | .0  | .3   | 43.5  |              |
| 10+          | PCP    | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | 18.0 | 25.1 | .6  | .1 | .1 | .1 | *  | .8  | .0  | .1   | 45.1  |              |
|              | TOT %  | 18.0 | 25.1 | .6  | .1 | .1 | .1 | *  | .8  | .0  | .1   | 45.1  |              |
| TOT OBS      |        | 6779 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |        | 42.2 | 52.1 | 1.3 | .2 | .4 | .4 | .3 | 2.2 | .0  | .8   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | *  | *  | .0 | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | *  | *  | .0  | .0  |      | .1    |              |
|              | 11-21      | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  |      | *     |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  |      | .0    |              |
|              | TOT %      | *    | *    | .0  | .0 | *  | *  | .0 | .0  | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0  | *  | .0 | .0 | .0 | *   | .0  | *    | *     |              |
|              | 4-10       | .1   | .1   | *   | *  | .0 | .0 | .0 | *   | .0  |      | .2    |              |
|              | 11-21      | .2   | .5   | *   | .0 | .0 | .0 | .0 | *   | .0  |      | .7    |              |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  |      | .1    |              |
|              | TOT %      | .3   | .7   | *   | *  | .0 | .0 | .0 | .1  | .0  | *    | 1.0   |              |
| 1<2          | 0-3        | *    | *    | *   | .0 | .0 | .0 | .0 | .0  | .0  | *    | .1    |              |
|              | 4-10       | .1   | .1   | .0  | .0 | .0 | *  | .0 | .0  | .0  |      | .2    |              |
|              | 11-21      | .3   | .5   | *   | .0 | .0 | .0 | .0 | *   | .0  |      | .8    |              |
|              | 22+        | .1   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  |      | .1    |              |
|              | TOT %      | .5   | .6   | *   | .0 | .0 | *  | .0 | *   | .0  | *    | 1.2   |              |
| 2<5          | 0-3        | .1   | *    | .0  | .0 | *  | *  | *  | *   | .0  | .2   | .4    |              |
|              | 4-10       | 1.0  | .5   | .1  | *  | *  | *  | *  | .2  | .0  |      | 1.8   |              |
|              | 11-21      | 2.1  | 2.0  | .1  | *  | *  | *  | .0 | .1  | .0  |      | 4.3   |              |
|              | 22+        | .7   | .8   | *   | .0 | .0 | *  | *  | .0  | .0  |      | 1.5   |              |
|              | TOT %      | 3.9  | 3.3  | .1  | *  | .1 | .1 | .1 | .3  | .0  | .2   | 8.0   |              |
| 5<10         | 0-3        | .2   | .1   | *   | .0 | *  | *  | .1 | .1  | .0  | .2   | .8    |              |
|              | 4-10       | 3.5  | 2.7  | .2  | .0 | *  | .1 | .1 | .5  | .0  |      | 7.2   |              |
|              | 11-21      | 10.7 | 14.4 | .3  | .0 | .1 | *  | *  | .2  | .0  |      | 25.8  |              |
|              | 22+        | 2.5  | 4.8  | .1  | *  | .0 | *  | *  | .1  | .0  |      | 7.5   |              |
|              | TOT %      | 17.0 | 22.1 | .6  | *  | .1 | .1 | .1 | .9  | .0  | .2   | 41.2  |              |
| 10+          | 0-3        | .2   | .1   | *   | .0 | .0 | .0 | *  | .1  | .0  | .2   | .6    |              |
|              | 4-10       | 4.6  | 5.1  | .3  | .1 | .1 | .1 | *  | .4  | .0  |      | 10.5  |              |
|              | 11-21      | 10.9 | 19.4 | .4  | .1 | .1 | *  | *  | .3  | .0  |      | 31.2  |              |
|              | 22+        | 1.9  | 4.0  | *   | .0 | *  | *  | .0 | *   | .0  |      | 6.0   |              |
|              | TOT %      | 17.6 | 28.7 | .7  | .1 | .1 | .1 | *  | .8  | .0  | .2   | 48.3  |              |
| TOT OBS      |            | 9414 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            | 39.3 | 55.3 | 1.5 | .2 | .3 | .3 | .3 | 2.0 | .0  | .7   | 100.0 |              |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1858-1973

JULY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .8         | .1         | .6         | 3.0        | 6.5          | 5.1          | 1.7          | .6           | .6           | .9    | 19.9  | 80.1               | 1399         |
| 06009          | .4         | .3         | 2.0        | 5.7        | 16.8         | 13.0         | 6.0          | 1.6          | 1.1          | 2.9   | 49.7  | 50.3               | 1367         |
| 12015          | .5         | .2         | 1.2        | 5.0        | 10.6         | 8.7          | 4.7          | 1.8          | .9           | 2.5   | 36.0  | 64.0               | 1521         |
| 18021          | .3         | .1         | .5         | 2.1        | 5.3          | 4.2          | 1.3          | .6           | .7           | 1.7   | 16.8  | 83.2               | 1460         |
| TOT            | 30         | 10         | 60         | 227        | 559          | 443          | 196          | 66           | 47           | 115   | 1753  | 3994               | 5747         |
| PCT            | .5         | .2         | 1.0        | 3.9        | 9.7          | 7.7          | 3.4          | 1.1          | .8           | 2.0   | 30.5  | 69.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .7    | .8  | 6.6 | 39.3 | 52.5 | 2120         |
| 06009          | .2   | 1.1   | .9  | 7.3 | 43.0 | 47.5 | 2526         |
| 12015          | .2   | 1.0   | 1.3 | 9.7 | 40.3 | 47.5 | 2245         |
| 18021          | .1   | 1.5   | 1.9 | 8.6 | 41.8 | 46.0 | 2597         |
| TOT            | 15   | 104   | 117 | 766 | 3911 | 4575 | 9488         |
| PCT            | .2   | 1.1   | 1.2 | 8.1 | 41.2 | 48.2 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500YD | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|----------------|------------|-------------|----------------|-------------------|--------------|
| 00003          | .7             | 1.6        | 10.6        | 15.1           | 74.3              | 1348         |
| 06009          | .4             | 2.9        | 16.4        | 39.3           | 44.3              | 1323         |
| 12015          | .5             | 2.4        | 17.1        | 26.6           | 56.3              | 1485         |
| 18021          | .4             | 1.0        | 13.1        | 12.7           | 74.2              | 1425         |
| TOT            | 28             | 109        | 801         | 1300           | 3480              | 5581         |
| PCT            | .5             | 2.0        | 14.4        | 23.3           | 62.4              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | .0    | .1    | .2    | .1    | .1    | .0     | 26           | .5          |
| 75/79  | .0   | .0    | *     | .1    | .9    | 3.4   | 2.1   | .5     | 382          | 7.0         |
| 70/74  | *    | .0    | .0    | .1    | 1.2   | 12.9  | 29.0  | 13.8   | 3116         | 57.0        |
| 65/69  | .0   | .0    | .0    | .0    | *     | 2.1   | 20.0  | 13.2   | 1933         | 35.3        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | *     | .1    | .1     | 13           | .2          |
| TOTAL  | 1    | 0     | 2     | 11    | 124   | 1016  | 2806  | 1511   | 5471         | 100.0       |
| PCT    | *    | .0    | *     | .2    | 2.3   | 18.6  | 51.3  | 27.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| .2   | .2   | *   | *  | *  | .0 | .0 | *   | .0  | .0   |
| 3.3  | 3.3  | .1  | .0 | *  | .1 | *  | .2  | .0  | *    |
| 23.8 | 30.2 | .7  | .1 | .1 | .1 | .2 | 1.4 | .0  | .3   |
| 14.9 | 19.0 | .5  | .1 | .1 | .1 | .1 | .4  | .0  | .1   |
| .1   | .1   | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   |
| 42.3 | 52.9 | 1.4 | .2 | .3 | .3 | .3 | 2.0 | .0  | .4   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 83  | 75  | 73  | 70  | 67 | 65 | 57  | 69.7 | 2667         |
| 06009          | 86  | 76  | 74  | 70  | 66 | 64 | 57  | 69.8 | 3603         |
| 12015          | 86  | 81  | 78  | 72  | 68 | 66 | 54  | 72.6 | 2746         |
| 18021          | 90  | 81  | 78  | 72  | 68 | 66 | 61  | 72.1 | 3609         |
| TOT            | 90  | 80  | 76  | 71  | 67 | 65 | 54  | 71.0 | 12625        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00E03         | .1   | .1    | .0    | 7.7   | 50.2  | 42.0   | 88   | 1368         |
| 06E09         | .0   | .0    | .7    | 12.0  | 51.6  | 35.7   | 87   | 1338         |
| 12E15         | .0   | .4    | 4.7   | 30.6  | 50.2  | 14.1   | 82   | 1414         |
| 18E21         | .0   | .5    | 3.7   | 23.2  | 52.6  | 19.9   | 83   | 1399         |
| TOT           | 1    | 13    | 127   | 1023  | 2824  | 1531   | 85   | 5519         |



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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1858-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | 6     | *        | .1        |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .2       | .2       | .0       | 24    | .1       | .3        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .4       | .4       | .1       | .0       | 58    | .1       | .9        |
| 7/8                | .0       | .0       | .0       | *        | .3       | 1.0      | .9       | *        | .0       | 137   | .3       | 1.9       |
| 6                  | .0       | .0       | .0       | *        | .5       | .9       | .4       | .0       | .0       | 116   | .2       | 1.7       |
| 5                  | .0       | .0       | .0       | .2       | 1.5      | 2.2      | .4       | *        | .0       | 266   | .5       | 3.8       |
| 4                  | .0       | .0       | *        | .5       | 2.8      | 2.9      | .4       | .0       | .0       | 406   | .5       | 6.1       |
| 3                  | .0       | .0       | .0       | 1.0      | 4.6      | 2.9      | .3       | *        | *        | 544   | .7       | 8.1       |
| 2                  | .0       | .0       | .1       | 2.8      | 8.4      | 3.5      | .1       | *        | .0       | 916   | 1.3      | 13.5      |
| 1                  | .0       | .0       | *        | 4.2      | 13.3     | 3.1      | .1       | .0       | .0       | 1279  | 1.4      | 19.3      |
| 0                  | .0       | .0       | .1       | 4.4      | 12.4     | 1.8      | *        | *        | *        | 1155  | 1.2      | 17.5      |
| -1                 | .0       | .0       | *        | 2.1      | 7.3      | .5       | *        | .0       | .0       | 619   | .7       | 9.3       |
| -2                 | .0       | .0       | .2       | 1.4      | 3.6      | .3       | .0       | .0       | .0       | 331   | .3       | 5.0       |
| -3                 | .0       | .0       | *        | .6       | 1.1      | .2       | .0       | .0       | .0       | 115   | *        | 1.8       |
| -4                 | .0       | .0       | .1       | .5       | .7       | .1       | .0       | .0       | .0       | 83    | .1       | 1.2       |
| -5                 | .0       | .0       | *        | .4       | .3       | .1       | .0       | .0       | .0       | 51    | .1       | .7        |
| -6                 | .0       | .0       | *        | .1       | .2       | *        | .0       | .0       | .0       | 23    | .0       | .4        |
| -7/-8              | .0       | *        | *        | .1       | .2       | .0       | .0       | .0       | .0       | 23    | *        | .3        |
| -9/-10             | .0       | .0       | .1       | .1       | *        | .0       | .0       | .0       | .0       | 9     | *        | .1        |
| -11/-13            | .0       | .0       | .1       | *        | *        | .0       | .0       | .0       | .0       | 6     | *        | .1        |
| -14/-16            | *        | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | 3     | .0       | *         |
| TOTAL              | 1        | 2        | 48       | 1133     | 3531     | 1219     | 203      | 31       | .5       | 6173  | 470      | 5703      |
| PCT                | *        | *        | .8       | 18.4     | 57.2     | 19.7     | 3.3      | .5       | .1       | 100.0 | 7.6      | 92.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | NE | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|----|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .7   | .3    | .0    | .0    | .0  | 1.3  | .0 | .5  | .1   | .0    | .0    | .0    | .0  | .7   |
| 1-2     | .2  | 4.2  | 3.2   | .0    | .0    | .0  | 7.6  | .1 | 3.1 | 3.6  | .0    | .0    | .0    | .0  | 6.8  |
| 3-4     | .0  | 2.7  | 9.9   | .9    | .0    | .0  | 13.6 | .0 | 2.2 | 10.8 | 1.4   | .0    | .0    | .0  | 14.4 |
| 5-6     | .1  | .5   | 8.6   | 1.3   | .0    | .0  | 10.4 | .0 | .7  | 11.1 | 3.2   | .0    | .0    | .0  | 15.0 |
| 7       | .0  | .1   | 4.2   | 2.1   | *     | .0  | 6.4  | .0 | *   | 4.7  | 3.2   | *     | .0    | .0  | 7.9  |
| 8-9     | .0  | .0   | 1.2   | 1.4   | *     | .0  | 2.6  | .0 | .0  | 1.7  | 1.6   | *     | .0    | .0  | 3.3  |
| 10-11   | .0  | .0   | .5    | .8    | *     | .0  | 1.3  | .0 | *   | .9   | 1.2   | *     | .0    | .0  | 2.2  |
| 12      | .0  | *    | .1    | .1    | *     | .0  | .3   | .0 | *   | .1   | .4    | *     | .0    | .0  | .6   |
| 13-16   | .0  | .0   | *     | .1    | *     | .0  | .2   | .0 | .0  | *    | .3    | *     | .0    | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .5  | 8.3  | 28.1  | 6.6   | .1    | .0  | 43.7 | .1 | 6.6 | 33.2 | 11.3  | .1    | .0    | .0  | 51.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SE | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | *    | .0    | .0    | .0    | .0  | *   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | .2   | *     | .0    | .0    | .0  | .2  | .0 | .1  | *    | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .1   | .3    | .0    | .0    | .0  | .3  | .0 | *   | *    | .0    | .0    | .0    | .0  | *   |
| 5-6     | .0  | .1   | .1    | *     | .0    | .0  | .2  | .0 | *   | *    | .0    | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0 | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | *   | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .4   | .4    | .1    | .0    | .0  | .9  | .0 | .1  | .1   | .1    | .1    | .0    | .0  | .3  |

PERIOD: (OVER-ALL) 1963-1973

JULY

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     |  | SW  |      |       |       |       |     |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |     |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .2   | .0    | .0    | .0    | .0  | .0  |  | .2  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .1  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |
| TOT PCT | .0  | .1   | .2    | .0    | .0    | .0  | .3  |  | .0  | .2   | .1    | .0    | .0    | .0  | .0  |  | .3  |

| HGT     | W   |      |       |       |       |     |     |  | NW  |      |       |       |       |     |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |     |           |
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  |  | .0  | .1   | .0    | .0    | .0    | .0  | .0  |  | .1  |           |
| 1-2     | .1  | .1   | .0    | .0    | .0    | .0  | .1  |  | .0  | .4   | .1    | .0    | .0    | .0  | .0  |  | .5  |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .2   | .2    | .1    | .0    | .0  | .0  |  | .5  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .2    | .1    | .0    | .0  | .0  |  | .3  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .1    | .0    | .0  | .0  |  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .1    | .0    | .0    | .0  | .0  |  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  |           |
| TOT PCT | .1  | .2   | .0    | .0    | .0    | .0  | .3  |  | .1  | .7   | .7    | .2    | .0    | .0  | .0  |  | 1.7 | 98.7      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.8 | 1.5  | .4    | .0    | .0    | .0  | 3.7   |         |
| 1-2     | .4  | 8.4  | 6.9   | .0    | .0    | .0  | 15.7  |         |
| 3-4     | .0  | 5.2  | 21.3  | 2.3   | .0    | .0  | 28.9  |         |
| 5-6     | .1  | 1.2  | 20.1  | 4.5   | .0    | .0  | 25.9  |         |
| 7       | .0  | .2   | 9.1   | 5.4   | .0    | .0  | 14.7  |         |
| 8-9     | .0  | .0   | 3.0   | 3.0   | .1    | .0  | 6.1   |         |
| 10-11   | .0  | .0   | 1.4   | 2.0   | .0    | .0  | 3.5   |         |
| 12      | .0  | .0   | .2    | .6    | .1    | .0  | .9    |         |
| 13-16   | .0  | .0   | .1    | .4    | .1    | .0  | .5    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.3 | 16.6 | 62.5  | 18.4  | .2    | .0  | 100.0 | 3694    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .4  | 4.2 | 9.2  | 7.9  | 3.7  | 1.8  | 1.0   | .4  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1298  | 5        |
| 6-7          | .0  | .6  | 4.2  | 9.1  | 8.0  | 4.7  | 1.9   | .4  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1316  | 6        |
| 8-9          | .0  | .2  | 1.0  | 3.2  | 4.1  | 3.7  | 1.9   | .5  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 688   | 7        |
| 10-11        | .0  | .1  | .3   | .6   | 1.2  | 1.5  | .8    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 226   | 8        |
| 12-13        | .0  | .0  | .8   | .4   | .4   | .3   | .7    | .1  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 139   | 7        |
| >13          | .0  | .0  | .0   | .2   | .3   | .1   | .1    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 797   | 5        |
| INDET        | 1.0 | 2.2 | 4.7  | 3.4  | 3.3  | 1.6  | 1.0   | .4  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 4499  | 6        |
| TOT PCT      | 1.4 | 7.3 | 20.2 | 24.9 | 21.1 | 13.7 | 7.4   | 2.1 | 1.7   | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WO PCPN | FOG WO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | *    | .0        | *    | .0        | .0   | .0              | .0   | *               | .1             | .5                      | 6.7         | *                   | 7.8        | .9                   | 84.0       |
| NE                 | .1   | *         | .1   | .0        | .0   | .0              | .0   | .2              | *              | .5                      | 5.1         | *                   | 6.1        | .9                   | 87.1       |
| E                  | .0   | .4        | .4   | .0        | .0   | .0              | .0   | .8              | 1.6            | .8                      | 4.5         | .0                  | 6.9        | .6                   | 84.8       |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 8.9                     | .0          | .0                  | 2.2        | .0                   | 88.9       |
| S                  | 2.4  | 2.4       | .0   | .0        | .0   | .0              | .0   | 4.7             | 1.8            | 2.4                     | 5.3         | .0                  | 3.5        | .0                   | 82.4       |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .9             | .0                      | 6.4         | .0                  | .9         | .0                   | 91.7       |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 8.5         | .0                  | 9.6        | .0                   | 81.9       |
| NW                 | .9   | .0        | .0   | .0        | .0   | .0              | .0   | .9              | .2             | 1.1                     | 11.1        | 1.7                 | 4.4        | .9                   | 79.7       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 10.0        | .0                  | 13.3       | .0                   | 76.7       |
| TOT PCT            | .1   | *         | .1   | .0        | .0   | .0              | .0   | .2              | .1             | .5                      | 5.9         | .1                  | 6.9        | .9                   | 85.5       |
| TOT OBS:           | 7062 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                   |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|-------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG<br>WO<br>PCPN | FOG MU<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 0003          | .1                 | .1           | .1   | .0           | .0   | .0                    | .0   | .2                      | .3                | 1.2          | 4.5               | .1                | 5.4           | .8                              | 87.6             |
| 0609          | .2                 | .1           | .0   | .0           | .0   | .0                    | .0   | .2                      | .1                | .7           | 5.7               | .1                | 5.5           | .6                              | 87.1             |
| 1205          | .1                 | .0           | .2   | .0           | .0   | .0                    | .0   | .2                      | .0                | .1           | 5.8               | .1                | 7.2           | 1.3                             | 85.4             |
| 18021         | .1                 | .0           | .0   | .0           | .0   | .0                    | .0   | .1                      | .0                | .3           | 7.6               | .1                | 9.2           | .8                              | 82.0             |
| TOT PCT       | .1                 | *            | .1   | .0           | .0   | .0                    | .0   | .2                      | .1                | .5           | 5.9               | .1                | 6.9           | .9                              | 85.4             |
| TOT OBS:      | 7163               |              |      |              |      |                       |      |                         |                   |              |                   |                   |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .4                 | 10.0 | 20.5  | 3.9   | .1    | .0  |       | 34.9      | 14.2     |          | 37.1       | 43.0  | 34.5  | 25.2  | 33.6  | 41.2  | 38.6  | 32.7  |
| NE       | .4                 | 12.5 | 37.3  | 8.3   | .1    | .0  |       | 58.6      | 15.2     |          | 56.1       | 49.7  | 58.2  | 66.9  | 59.9  | 54.1  | 56.2  | 61.5  |
| E        | .1                 | 1.0  | 1.4   | .2    | *     | .0  |       | 2.8       | 12.8     |          | 2.7        | 3.9   | 3.2   | 4.5   | 3.1   | 2.0   | 1.8   | 2.2   |
| SE       | .1                 | .1   | *     | *     | .0    | .0  |       | .3        | 8.4      |          | .4         | .2    | .3    | .3    | .3    | .0    | .2    | .2    |
| S        | .1                 | .2   | .1    | *     | .0    | .0  |       | .4        | 10.6     |          | .4         | 1.1   | .4    | .1    | .4    | .0    | .5    | .3    |
| SW       | .1                 | .1   | .1    | *     | .0    | .0  |       | .3        | 9.2      |          | .4         | .2    | .3    | .1    | .4    | .0    | .3    | .0    |
| W        | .1                 | .2   | .1    | *     | .0    | .0  |       | .3        | 6.9      |          | .2         | .6    | .4    | .5    | .4    | .0    | .3    | .3    |
| NW       | .1                 | 1.0  | .5    | *     | .0    | .0  |       | 1.7       | 9.2      |          | 1.9        | 1.4   | 1.7   | 1.8   | 1.2   | 2.2   | 1.7   | 1.9   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .8                 |      |       |       |       |     |       | .8        | .0       |          | .9         | .0    | .9    | .8    | .8    | .5    | .5    | .9    |
| TOT OBS  | 270                | 3286 | 7852  | 1627  | 25    | 0   | 13060 |           | 14.5     |          | 2564       | 160   | 2486  | 1166  | 2713  | 184   | 2621  | 1166  |
| TOT PCT  | 2.1                | 25.2 | 60.1  | 12.5  | .2    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 3.0                | 19.1 | 12.2  | .5    | .0  |       |  | 34.9      | 14.2     |          | 37.4       | 31.5  | 34.0  | 36.8  |    |
| NE       | 3.0                | 30.1 | 24.2  | 1.4   | .0  |       |  | 58.6      | 15.2     |          | 55.7       | 61.0  | 59.5  | 57.8  |    |
| E        | .4                 | 1.5  | .8    | *     | .0  |       |  | 2.8       | 12.8     |          | 2.8        | 3.6   | 3.0   | 1.9   |    |
| SE       | .1                 | .1   | *     | .0    | .0  |       |  | .3        | 8.4      |          | .3         | .3    | .3    | .2    |    |
| S        | .2                 | .1   | .1    | *     | .0  |       |  | .4        | 10.6     |          | .5         | .3    | .4    | .4    |    |
| SW       | .1                 | .1   | *     | .0    | .0  |       |  | .3        | 9.2      |          | .3         | .3    | .3    | .2    |    |
| W        | .2                 | .1   | *     | .0    | .0  |       |  | .3        | 6.9      |          | .3         | .4    | .4    | .3    |    |
| NW       | .6                 | .9   | .2    | *     | .0  |       |  | 1.7       | 9.2      |          | 1.8        | 1.8   | 1.3   | 1.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | .8                 |      |       |       |     |       |  | .8        | .0       |          | .8         | .8    | .8    | .6    |    |
| TOT OBS  | 1109               | 6789 | 4910  | 252   | 0   | 13060 |  |           | 14.5     |          | 2724       | 3652  | 2897  | 3784  |    |
| TOT PCT  | 8.5                | 52.0 | 37.6  | 1.9   | .0  |       |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |     |       |          |           |
| 00003 | .8   | 1.1 | 25.0 | 60.4               | 12.7  | .1    | .0 | .0  | 14.6  | 100.0    | 2724      |
| 06009 | .8   | 1.0 | 26.0 | 58.7               | 12.6  | .3    | .0 | .0  | 14.3  | 100.0    | 3652      |
| 12015 | .8   | 1.4 | 25.0 | 59.7               | 13.0  | .2    | .0 | .0  | 14.5  | 100.0    | 2897      |
| 18021 | .6   | 1.1 | 24.6 | 61.7               | 11.8  | .2    | .0 | .0  | 14.6  | 100.0    | 3787      |
| TOT   | 100  | 170 | 3206 | 7852               | 1627  | 25    | 0  | 0   | 14.5  |          | 13060     |
| PCT   | .8   | 1.3 | 25.2 | 60.1               | 12.5  | .2    | .0 |     | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 27.5 | 4.9  | 6.8  | 4.2  |           | 2.3              |
| NE       | 27.4 | 7.0  | 10.6 | 6.1  |           | 3.0              |
| E        | .7   | .3   | .3   | .2   |           | 3.4              |
| SE       | .1   | *    | *    | *    |           | 2.6              |
| S        | .4   | *    | .1   | .1   |           | 2.1              |
| SW       | .3   | *    | .1   | *    |           | 2.3              |
| W        | .1   | .1   | .1   | *    |           | 2.8              |
| NW       | 1.2  | .2   | .2   | .1   |           | 1.7              |
| VAR      | .0   | .0   | .0   | .0   |           | .0               |
| CALM     | .6   | *    | .2   | .1   |           | 2.4              |
| TOT OBS  | 3308 | 728  | 1055 | 626  | 5777      | 2.7              |
| TOT PCT  | 58.3 | 12.6 | 18.3 | 10.8 | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .1  | .1  | .2  | 1.0 | 2.7  | 2.8  | 1.1  | .3   | .2   | .7    | 34.3    |       |
| NE      | .2  | *   | .2  | 1.9 | 4.1  | 3.7  | 1.8  | .6   | .2   | .7    | 37.7    |       |
| E       | *   | .0  | *   | *   | .2   | .1   | *    | *    | .0   | *     | 1.0     |       |
| SE      | .0  | .0  | *   | .0  | *    | .0   | *    | .0   | .0   | .0    | .1      |       |
| S       | .0  | .0  | .0  | *   | .0   | .1   | *    | .0   | .0   | .0    | .5      |       |
| SW      | *   | .0  | .0  | .0  | .0   | *    | *    | .0   | .0   | .0    | .4      |       |
| W       | .0  | .0  | .0  | .0  | *    | .0   | .0   | *    | .0   | .0    | .2      |       |
| NW      | .0  | .0  | *   | .0  | *    | *    | *    | .0   | *    | .0    | 1.5     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .1  | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .1    | .6      |       |
| TOT OBS | 24  | 4   | 31  | 171 | 413  | 394  | 177  | 51   | 21   | 86    | 4405    | 5777  |
| TOT PCT | .4  | .1  | .5  | 3.0 | 7.1  | 6.8  | 3.1  | .9   | .4   | 1.5   | 76.3    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | # OR >10  | # OR >5 | # OR >2 | # OR >1 | # OR >1/2 | # OR >1/4 | # OR >50YD | # OR >0 |
| # OR >6500     | .6        | 1.5     | 1.9     | 1.9     | 1.9       | 1.9       | 1.9        | 1.9     |
| # OR >5000     | 1.2       | 2.4     | 2.8     | 2.8     | 2.8       | 2.8       | 2.8        | 2.8     |
| # OR >3500     | 3.0       | 5.1     | 5.8     | 5.8     | 5.8       | 5.8       | 5.8        | 5.8     |
| # OR >2000     | 6.4       | 11.2    | 12.6    | 12.6    | 12.7      | 12.7      | 12.7       | 12.7    |
| # OR >1000     | 10.7      | 17.9    | 19.7    | 19.7    | 19.8      | 19.8      | 19.8       | 19.8    |
| # OR >600      | 12.2      | 20.6    | 22.6    | 22.7    | 22.7      | 22.7      | 22.7       | 22.7    |
| # OR >300      | 12.5      | 21.1    | 23.2    | 23.2    | 23.3      | 23.3      | 23.3       | 23.3    |
| # OR >150      | 12.5      | 21.1    | 23.2    | 23.3    | 23.3      | 23.3      | 23.3       | 23.3    |
| # OR >0        | 12.5      | 21.2    | 23.5    | 23.6    | 23.7      | 23.7      | 23.7       | 23.7    |
| TOTAL          | 790       | 1236    | 1369    | 1374    | 1378      | 1380      | 1382       | 1382    |

TOTAL NUMBER OF OBS: 5826

PCT FREQ NH <5/8: 76.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | DBSCD | TOTAL OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 43.9 | 11.3 | 8.3 | 6.6 | 5.2 | 4.4 | 5.1 | 6.1 | 8.8 | .4    | 6121      |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | *    | *    | .0  | .0 | .0 | .0 | *  | .0  | .0  | *    | .1    |              |
|              | TOT %  | *    | *    | .0  | .0 | .0 | .0 | *  | .0  | .0  | *    | .1    |              |
| 1/2<1        | PCP    | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | 1.1  | 1.2  | *   | .0 | *  | *  | .0 | *   | .0  | *    | 2.4   |              |
|              | TOT %  | 1.1  | 1.3  | *   | .0 | *  | *  | .0 | *   | .0  | *    | 2.5   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .4   | .8   | *   | .0 | .0 | .0 | *  | *   | .0  | .0   | 1.2   |              |
|              | TOT %  | .4   | .8   | *   | .0 | .0 | .0 | *  | *   | .0  | .0   | 1.2   |              |
| 2<5          | PCP    | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | 3.0  | 2.7  | .1  | .0 | *  | *  | *  | .2  | .0  | .1   | 6.2   |              |
|              | TOT %  | 3.0  | 2.8  | .1  | .0 | *  | *  | *  | .2  | .0  | .1   | 6.2   |              |
| 5<10         | PCP    | .0   | .1   | *   | .0 | *  | .0 | .0 | *   | .0  | .0   | .1    |              |
|              | NO PCP | 15.0 | 18.8 | .7  | .1 | .2 | .1 | .1 | .5  | .0  | .3   | 35.8  |              |
|              | TOT %  | 15.0 | 18.8 | .7  | .1 | .2 | .1 | .1 | .5  | .0  | .3   | 35.9  |              |
| 10+          | PCP    | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | 22.6 | 28.5 | .9  | .1 | .3 | .3 | .1 | .9  | .0  | .4   | 54.1  |              |
|              | TOT %  | 22.6 | 28.5 | .9  | .1 | .3 | .3 | .1 | .9  | .0  | .4   | 54.2  |              |
| TOT OBS      |        |      |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |        |      |      |     |    |    |    |    |     |     |      |       |              |
|              |        | 42.1 | 52.2 | 1.7 | .2 | .6 | .4 | .3 | 1.6 | .0  | .9   | 100.0 | 7043         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     |              |
|              | 4-10       | .0   | *    | .0  | .0 | .0 | .0 | *  | .0  | .0  | *    | *     |              |
|              | 11-21      | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | .0    |              |
|              | TOT %      | *    | .1   | .0  | .0 | .0 | .0 | *  | .0  | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | .1    |              |
|              | 4-10       | .2   | .2   | *   | .0 | *  | *  | .0 | .0  | .0  | *    | .4    |              |
|              | 11-21      | .5   | .6   | *   | .0 | .0 | .0 | .0 | *   | .0  | *    | 1.1   |              |
|              | 22+        | .2   | .2   | *   | .0 | .0 | .0 | .0 | .0  | .0  | *    | .4    |              |
|              | TOT %      | .8   | 1.0  | *   | .0 | *  | *  | .0 | *   | .0  | *    | 1.9   |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | *   | *  | *  | *  | *  | *   | .0  | .0   | .3    |              |
|              | 11-21      | .2   | .5   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .7    |              |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .3   | .7   | *   | *  | *  | .0 | *  | *   | .0  | .0   | 1.0   |              |
| 2<5          | 0-3        | .1   | *    | .0  | .0 | *  | *  | *  | *   | .0  | .1   | .2    |              |
|              | 4-10       | .7   | .6   | *   | .0 | .0 | .0 | *  | .1  | .0  | *    | 1.4   |              |
|              | 11-21      | 1.6  | 1.9  | *   | .0 | *  | *  | .0 | *   | .0  | *    | 3.8   |              |
|              | 22+        | .3   | .6   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .8    |              |
|              | TOT %      | 2.8  | 3.1  | .1  | .0 | *  | *  | *  | .1  | .0  | .1   | 6.2   |              |
| 5<10         | 0-3        | .1   | .1   | *   | *  | *  | *  | *  | *   | .0  | .3   | .3    |              |
|              | 4-10       | 3.2  | 3.5  | .3  | *  | *  | *  | .1 | .2  | .0  | *    | 7.3   |              |
|              | 11-21      | 8.5  | 13.0 | .4  | *  | .1 | *  | *  | .2  | .0  | *    | 22.3  |              |
|              | 22+        | 1.8  | 3.0  | .1  | *  | *  | *  | *  | *   | .0  | *    | 5.0   |              |
|              | TOT %      | 13.5 | 19.5 | .8  | .1 | .2 | .1 | .1 | .5  | .0  | .3   | 35.0  |              |
| 10+          | 0-3        | .2   | .2   | *   | *  | *  | *  | *  | *   | .0  | .3   | .9    |              |
|              | 4-10       | 6.5  | 7.0  | .4  | .1 | .1 | .1 | .1 | .5  | .0  | *    | 14.8  |              |
|              | 11-21      | 12.2 | 20.9 | .6  | *  | .1 | *  | *  | .3  | .0  | *    | 34.1  |              |
|              | 22+        | 2.0  | 3.7  | .1  | *  | *  | *  | .0 | *   | .0  | *    | 5.9   |              |
|              | TOT %      | 21.0 | 31.7 | 1.1 | .1 | .2 | .2 | .1 | .8  | .0  | .3   | 55.7  |              |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            |      |      |     |    |    |    |    |     |     |      |       |              |
|              |            | 38.5 | 56.0 | 2.0 | .2 | .4 | .3 | .3 | 1.5 | .0  | .7   | 100.0 | 9622         |

## AUGUST

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003          | .4         | .0         | .3         | 2.5        | 4.9          | 4.3          | 1.7          | .8           | .0           | 1.2   | 16.0  | 84.0                | 1448         |
| 06009          | .5         | .1         | 1.2        | 6.1        | 12.4         | 10.8         | 4.6          | 1.5          | .6           | 2.0   | 39.8  | 60.2                | 1375         |
| 12015          | .4         | .1         | .6         | 2.6        | 8.4          | 8.8          | 4.0          | .9           | .4           | 1.4   | 27.6  | 72.4                | 1611         |
| 18021          | .3         | .1         | .1         | .6         | 2.6          | 3.1          | 1.8          | .4           | .4           | 1.4   | 10.7  | 89.3                | 1564         |
| TOT            | 24         | 4          | 32         | 172        | 417          | 400          | 180          | 52           | 22           | 88    | 1391  | 4607                | 5998         |
| PCT            | .4         | .1         | .5         | 2.9        | 7.0          | 6.7          | 3.0          | .9           | .4           | 1.5   | 23.2  | 76.8                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 1.8   | .9  | 5.2 | 33.2 | 59.0 | 2168         |
| 06009          | .2   | 2.1   | 1.0 | 5.3 | 37.4 | 53.9 | 2533         |
| 12015          | .1   | 1.3   | .7  | 8.0 | 34.5 | 55.4 | 2336         |
| 18021          | *    | 2.4   | 1.6 | 6.5 | 35.1 | 54.4 | 2687         |
| TOT            | 10   | 187   | 102 | 608 | 3416 | 5401 | 9724         |
| PCT            | .1   | 1.9   | 1.0 | 6.3 | 35.1 | 55.5 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .4            | .7         | 8.3         | 12.2            | 79.5               | 1397         |
| 06009          | .5            | 1.9        | 14.3        | 29.6            | 56.2               | 1332         |
| 12015          | .3            | 1.2        | 11.3        | 21.8            | 66.9               | 1572         |
| 18021          | .3            | .5         | 8.4         | 8.9             | 82.8               | 1525         |
| TOT            | 22            | 62         | 611         | 1043            | 4172               | 5826         |
| PCT            | .4            | 1.1        | 10.5        | 17.9            | 71.6               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | *     | .1    | .0    | .0     | 4            | .1          |
| 80/84  | .0   | .0    | *     | *     | .3    | .5    | .1    | .1     | 52           | 1.0         |
| 75/79  | .0   | .0    | .0    | .1    | 1.0   | 6.4   | 4.8   | 1.4    | 725          | 13.6        |
| 70/74  | .0   | .0    | .0    | .0    | .6    | 10.4  | 39.6  | 22.9   | 3908         | 73.5        |
| 65/69  | .0   | .0    | .0    | .0    | .2    | 5.6   | 6.0   | 6.0    | 630          | 11.8        |
| TOTAL  | 0    | 0     | 2     | 5     | 100   | 929   | 2666  | 1617   | 5319         | 100.0       |
| PCT    | .0   | .0    | *     | .1    | 1.9   | 17.5  | 50.1  | 30.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| *    | *    | .0  | *  | *  | *  | *  | .0  | .0  | .0   |
| .3   | .5   | .1  | .0 | *  | *  | *  | *   | .0  | .0   |
| 5.3  | 7.2  | .4  | *  | .1 | .1 | *  | .4  | .0  | .1   |
| 30.0 | 40.0 | 1.2 | .1 | .8 | .2 | .2 | 1.1 | .0  | .4   |
| 5.2  | 6.0  | .1  | *  | .1 | .1 | .1 | .2  | .0  | *    |
| 40.9 | 53.7 | 1.7 | .2 | .6 | .4 | .3 | 1.7 | .0  | .5   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 84  | 76  | 74  | 71  | 68 | 64 | 59  | 71.0 | 2735         |
| 06009          | 84  | 77  | 75  | 71  | 67 | 64 | 59  | 71.0 | 3645         |
| 12015          | 87  | 82  | 79  | 73  | 69 | 66 | 61  | 73.8 | 2849         |
| 18021          | 90  | 82  | 78  | 73  | 69 | 67 | 61  | 73.3 | 3719         |
| TOT            | 90  | 80  | 77  | 72  | 68 | 65 | 59  | 72.3 | 12948        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | .4    | 5.7   | 49.4  | 44.5   | 88   | 1325         |
| 06009          | .0   | .2    | .7    | 8.6   | 50.1  | 40.4   | 87   | 1296         |
| 12015          | .0   | .4    | 3.7   | 30.4  | 50.9  | 14.6   | 82   | 1367         |
| 18021          | .0   | .0    | 2.6   | 24.0  | 48.9  | 24.5   | 84   | 1402         |
| TOT            | 0    | 7     | 101   | 940   | 2685  | 1657   | 85   | 5390         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | .0       | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | *        | *        | .1       | .2       | *        | .0       | 23    | .1       | .3        |
| 9/10               | .0       | .0       | *        | *        | .1       | .3       | .2       | *        | .0       | 47    | .1       | .7        |
| 7/8                | .0       | .0       | .0       | .3       | .7       | 1.0      | .3       | .0       | .0       | 148   | .2       | 2.1       |
| 6                  | .0       | .0       | *        | .1       | 1.1      | .4       | *        | *        | .0       | 112   | .1       | 1.7       |
| 5                  | .0       | .0       | *        | .6       | 2.7      | .8       | *        | .0       | .0       | 263   | .3       | 3.9       |
| 4                  | .0       | .0       | .1       | 2.3      | 3.3      | .9       | *        | .0       | .0       | 419   | .8       | 5.8       |
| 3                  | .0       | .0       | .2       | 3.4      | 4.9      | .6       | *        | .0       | .0       | 576   | .7       | 8.4       |
| 2                  | .0       | .0       | .6       | 7.5      | 6.1      | .2       | *        | .0       | .0       | 920   | 1.1      | 13.4      |
| 1                  | .0       | *        | 1.0      | 11.7     | 6.5      | .2       | *        | .0       | .0       | 1236  | .9       | 18.5      |
| 0                  | .0       | *        | 1.4      | 12.4     | 4.4      | .1       | *        | .0       | .0       | 1171  | .9       | 17.5      |
| -1                 | .0       | .0       | .4       | 7.2      | 2.4      | .1       | .0       | .0       | .0       | 639   | .2       | 9.8       |
| -2                 | .0       | .1       | 1.1      | 3.4      | .7       | *        | .0       | .0       | .0       | 342   | .3       | 5.0       |
| -3                 | .0       | *        | .3       | 1.7      | .5       | .0       | .0       | .0       | .0       | 159   | .2       | 2.3       |
| -4                 | .0       | .3       | .6       | .7       | .3       | *        | .0       | .0       | .0       | 122   | .2       | 1.7       |
| -5                 | .0       | .3       | .4       | .5       | .2       | *        | .0       | .0       | .0       | 86    | .2       | 1.2       |
| -6                 | .0       | *        | .1       | .3       | *        | *        | .0       | .0       | .0       | 27    | *        | .4        |
| -7/-8              | *        | .1       | .2       | .1       | *        | .0       | .0       | .0       | .0       | 30    | .1       | .4        |
| -9/-10             | *        | .1       | *        | .1       | *        | .0       | .0       | .0       | .0       | 17    | *        | .2        |
| -11/-13            | *        | .1       | *        | .1       | .0       | .0       | .0       | .0       | .0       | 10    | .0       | .2        |
| -14/-16            | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| -17/-19            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *         |
| TOTAL              | 4        |          | 410      |          | 2169     |          | 59       |          | 1        | 6357  | 407      | 5950      |
| PCT                | .1       | 1.1      | 6.4      | 52.4     | 34.1     | 4.9      | .9       | .1       | *        | 100.0 | 6.4      | 92.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .1  | 1.4  | .3    | .0    | .0    | .0  | 1.8  | .1  | .5   | *     | .0    | .0    | .0  | .7   |
| 1-2     | .1  | 6.1  | 3.7   | .0    | .0    | .0  | 10.0 | .1  | 4.3  | 4.2   | .0    | .0    | .0  | 8.5  |
| 3-4     | *   | 4.6  | 9.7   | .5    | .0    | .0  | 14.8 | *   | 2.9  | 10.4  | .5    | .0    | .0  | 13.9 |
| 5-6     | .0  | .9   | 8.4   | 1.5   | .0    | .0  | 10.8 | .0  | .7   | 11.9  | 1.7   | .0    | .0  | 14.3 |
| 7       | .0  | .1   | 3.4   | 1.1   | *     | .0  | 4.7  | .0  | .2   | 5.8   | 1.6   | .0    | .0  | 7.6  |
| 8-9     | .0  | *    | .8    | .8    | .0    | .0  | 1.6  | .0  | .0   | 1.6   | 1.0   | .0    | .0  | 2.6  |
| 10-11   | .0  | .0   | .5    | .3    | .0    | .0  | .8   | .0  | .0   | .7    | .8    | .0    | .0  | 1.5  |
| 12      | .0  | *    | .1    | .1    | *     | .0  | .2   | .0  | .0   | .2    | .1    | .1    | .0  | .3   |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .1   | .0  | .0   | *     | .3    | .0    | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .2  | 13.1 | 26.9  | 4.6   | .1    | .0  | 44.8 | .2  | 8.5  | 34.9  | 6.0   | .1    | .0  | 49.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .0   | *     | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | *   | .3   | .2    | .0    | .0    | .0  | .5  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .2   | .4    | *     | .0    | .0  | .6  | .0  | .1   | *     | *     | .0    | .0  | .1  |
| 5-6     | .0  | *    | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | .6   | .9    | .1    | .0    | .0  | 1.5 | .0  | .1   | *     | *     | .0    | .0  | .2  |

PERIOD: (OVER-ALL) 1963-1973

AUGUST  
TABLE 18 (CONT)AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.5W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |    | PCT | SW  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .0  | *    | *     | .0    | .0    | .0  | *  |     | *   | .0   | *     | .0    | .0    | .0  | *  |     |
| 1-2     | .0  | .1   | *     | .0    | .0    | .0  | .1 |     | .0  | .1   | *     | .0    | .0    | .0  | .1 |     |
| 3-4     | .0  | *    | .1    | *     | .0    | .0  | .1 |     | .1  | *    | *     | *     | .0    | .0  | .1 |     |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1 |     | .0  | .0   | *     | .0    | .0    | .0  | *  |     |
| 7       | .0  | *    | *     | .0    | .0    | .0  | *  |     | .0  | .0   | *     | .0    | .0    | .0  | *  |     |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *  |     | .0  | .0   | .0    | *     | .0    | .0  | *  |     |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     |
| TOT PCT | .0  | .2   | .2    | *     | .0    | .0  | .5 |     | .1  | .1   | .1    | *     | .0    | .0  | .3 |     |

| HGT     | W   |      |       |       |       |     |    | PCT | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|----|-----|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |      |           |
| <1      | *   | .0   | .0    | .0    | .0    | .0  | *  |     | *   | .2   | *     | .0    | .0    | .0  | .3  |      |           |
| 1-2     | .0  | *    | .0    | .0    | .0    | .0  | *  |     | .1  | .7   | .1    | .0    | .0    | .0  | .8  |      |           |
| 3-4     | *   | *    | .0    | .0    | .0    | .0  | *  |     | .0  | .2   | .2    | .0    | .0    | .0  | .3  |      |           |
| 5-6     | .0  | .0   | *     | .0    | .0    | .0  | *  |     | .0  | .1   | .2    | .0    | .0    | .0  | .2  |      |           |
| 7       | .0  | .0   | .0    | *     | .0    | .0  | *  |     | .0  | *    | *     | *     | .0    | .0  | .1  |      |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | *    | .0    | *     | .0    | .0  | *   |      |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | *    | .0    | .0    | .0    | .0  | *   |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0 |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .1  | *    | *     | *     | .0    | .0  | .2 |     | .1  | 1.1  | .5    | *     | .0    | .0  | 1.7 | 98.8 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.7 | 2.2  | .4    | .0    | .0    | .0  | 4.3   |         |
| 1-2     | .3  | 11.6 | 8.1   | .0    | .0    | .0  | 20.1  |         |
| 3-4     | .2  | 7.9  | 20.6  | 1.1   | .0    | .0  | 29.8  |         |
| 5-6     | *   | 1.7  | 20.7  | 3.2   | .0    | .0  | 25.6  |         |
| 7       | .0  | .3   | 9.3   | 2.8   | *     | .0  | 12.5  |         |
| 8-9     | .0  | *    | 2.4   | 1.9   | .0    | .0  | 4.3   |         |
| 10-11   | .0  | .0   | 1.2   | 1.1   | .0    | .0  | 2.3   |         |
| 12      | .0  | *    | .2    | .2    | .1    | .0  | .6    |         |
| 13-16   | .0  | .0   | .1    | .3    | .0    | .0  | .4    |         |
| 17-19   | .0  | .0   | .0    | .0    | *     | .0  | *     |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.2 | 23.7 | 63.2  | 10.7  | .2    | .0  | 100.0 | 3890    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .5  | 7.5  | 12.3 | 8.6  | 4.0  | 1.4 | .5    | .1  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1647  | 4        |
| 6-7          | .0  | .8   | 4.7  | 8.9  | 8.2  | 3.0 | 1.7   | .8  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1335  | 6        |
| 8-9          | *   | .2   | 1.6  | 3.6  | 2.8  | 2.3 | 1.3   | .4  | .4    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 588   | 7        |
| 10-11        | .0  | .3   | .3   | .9   | .7   | .5  | .4    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 165   | 7        |
| 12-13        | .0  | .0   | .8   | .3   | .3   | .2  | .1    | .1  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 87    | 6        |
| >13          | .0  | .0   | .0   | .2   | .1   | .1  | .1    | *   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 25    | 7        |
| INDET        | 1.3 | 2.4  | 4.7  | 4.1  | 3.3  | 1.4 | .6    | .1  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 854   | 5        |
| TOTAL        | 88  | 524  | 1150 | 1250 | 911  | 417 | 221   | 84  | 52    | 4     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4701  | 5        |
| PCT          | 1.9 | 11.1 | 24.5 | 26.6 | 19.4 | 8.9 | 4.7   | 1.8 | 1.1   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973

SEPTEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG MEA |
| N                  | .1   | .1        | .1   | .0        | .0   | .0              | .0   | .3              | .2             | .8                      | 3.9         | .1                  | 6.5        | .3                   | 87.9       |
| NE                 | .2   | .2        | .3   | .0        | .0   | .0              | .0   | .7              | .2             | .6                      | 2.2         | .0                  | 4.9        | .5                   | 91.0       |
| E                  | 2.0  | 1.6       | .3   | .0        | .0   | .0              | .0   | 3.8             | .5             | 1.3                     | 3.5         | .0                  | 4.5        | .0                   | 86.4       |
| SE                 | 2.8  | 2.6       | .0   | .0        | .0   | .0              | .0   | 5.6             | .0             | .0                      | 1.4         | .0                  | 9.2        | .0                   | 83.8       |
| S                  | 3.4  | .0        | .0   | .0        | .0   | .0              | .0   | 3.4             | .0             | 3.4                     | .0          | .0                  | 11.2       | .0                   | 85.3       |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 2.3                     | .0          | .0                  | 3.4        | .0                   | 94.4       |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 2.0         | .0                  | 2.0        | .0                   | 95.9       |
| NW                 | .0   | 1.6       | .0   | .0        | .0   | .0              | .0   | 1.6             | .0             | .4                      | 1.6         | .0                  | 3.2        | .8                   | 92.4       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 2.4         | .0                  | 1.2        | .0                   | 96.4       |
| TOT PCT            | .3   | .2        | .2   | .0        | .0   | .0              | .0   | .7              | .2             | .7                      | 2.7         | *                   | 5.3        | .4                   | 90.0       |
| TOT OBS:           | 5875 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

\* PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                               |                  |  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|-------------------------------|------------------|--|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>SNOW | NO<br>SIG<br>WEA |  |
| 00003         | .6                 | .1           | .3   | .0           | .0   | .0                    | .0   | 1.0                | .2                      | 1.5          | 2.1               | .0                        | 3.6           | .3                            | 91.3             |  |
| 06009         | .4                 | .4           | .4   | .0           | .0   | .0                    | .0   | 1.2                | .1                      | 1.0          | 2.8               | .1                        | 3.7           | .5                            | 90.6             |  |
| 12015         | .2                 | .2           | .1   | .0           | .0   | .0                    | .0   | .5                 | .2                      | .0           | 2.6               | .1                        | 6.3           | .3                            | 90.0             |  |
| 18021         | .0                 | .2           | .1   | .0           | .0   | .0                    | .0   | .3                 | .1                      | .2           | 3.4               | .0                        | 7.3           | .5                            | 88.3             |  |
| TOT PCT       | .3                 | .2           | .2   | .0           | .0   | .0                    | .0   | .7                 | .2                      | .7           | 2.7               | *                         | 5.3           | .4                            | 90.0             |  |
| TOT OBS:      | 5974               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                               |                  |  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    | 00    |       |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 10.2 | 12.6  | 1.9   | *     | .0 |       | 25.9  | 12.2      |          | 29.2     | 38.5       | 25.7  | 18.1  | 22.7  | 21.4  | 29.5  | 25.8  |
| NE       | 1.0                | 19.4 | 36.6  | 6.0   | .1    | .0 |       | 63.1  | 13.7      |          | 59.6     | 54.4       | 63.3  | 68.5  | 65.5  | 70.6  | 61.6  | 63.3  |
| E        | .2                 | 2.4  | 2.2   | .2    | *     | .0 |       | 5.0   | 11.3      |          | 4.3      | 3.4        | 5.3   | 7.8   | 5.8   | .8    | 3.7   | 5.1   |
| SE       | .1                 | .4   | .1    | *     | .0    | .0 |       | .6    | 7.8       |          | .7       | .0         | .6    | .9    | .7    | .0    | .4    | .5    |
| S        | .1                 | .3   | .1    | *     | .0    | .0 |       | .5    | 7.5       |          | .3       | .0         | .3    | .7    | .8    | .0    | .5    | .4    |
| SW       | .2                 | .3   | .1    | .0    | .0    | .0 |       | .7    | 6.4       |          | .7       | .0         | .8    | .7    | .7    | .8    | .5    | .6    |
| W        | .2                 | .5   | .1    | *     | .0    | .0 |       | .8    | 6.2       |          | 1.2      | .0         | .8    | .9    | .5    | .6    | .7    | 1.1   |
| NW       | .5                 | 1.3  | .3    | *     | .0    | .0 |       | 2.1   | 7.0       |          | 2.3      | 2.1        | 2.0   | 1.7   | 1.9   | 3.4   | 2.1   | 2.5   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.2                |      |       |       |       |    |       | 1.2   | .0        |          | 1.7      | 1.5        | 1.1   | .8    | 1.3   | 2.4   | 1.0   | .8    |
| TOT OBS  | 536                | 3951 | 5935  | 929   | 12    | 0  | 11363 |       | 12.7      |          | 2219     | 131        | 2157  | 1066  | 2326  | 125   | 2275  | 1064  |
| TOT PCT  | 4.7                | 34.8 | 52.2  | 8.2   | .1    | .0 |       | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OPS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 4.7                | 14.9 | 6.1   | .3    | .0  |           | 25.9     | 12.2     | 29.8       | 23.2  | 22.6  | 28.3  |    |
| NE       | 6.1                | 36.5 | 19.4  | 1.1   | *   |           | 63.1     | 13.7     | 59.3       | 65.0  | 65.8  | 62.1  |    |
| E        | 1.1                | 2.9  | 1.0   | *     | *   |           | 5.0      | 11.3     | 4.3        | 6.1   | 5.6   | 4.1   |    |
| SE       | .3                 | .3   | .1    | .0    | .0  |           | .6       | 7.8      | .7         | .7    | .7    | .4    |    |
| S        | .3                 | .1   | *     | .0    | .0  |           | .5       | 7.5      | .3         | .4    | .7    | .5    |    |
| SW       | .4                 | .2   | *     | .0    | .0  |           | .7       | 6.4      | .7         | .8    | .7    | .6    |    |
| W        | .5                 | .3   | *     | .0    | .0  |           | .8       | 6.2      | 1.1        | .9    | .5    | .8    |    |
| NW       | 1.2                | .7   | .1    | *     | .0  |           | 2.1      | 7.0      | 2.3        | 1.9   | 1.9   | 2.2   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.2                |      |       |       |     |           | 1.2      | .0       | 1.7        | 1.0   | 1.4   | 1.0   |    |
| TOT OBS  | 1810               | 6348 | 3040  | 164   | 1   | 11363     |          | 12.7     | 2350       | 3223  | 2451  | 3339  |    |
| TOT PCT  | 15.9               | 55.9 | 26.8  | 1.4   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



## SEPTEMBER

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1897-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 |      | 4-10 |     | WIND SPEED (KNOTS) |       |       | 48+   | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|------|-----|--------------------|-------|-------|-------|-------|----------|-----------|
|       |      |     |      |      |     | 11-21              | 22-33 | 34-47 |       |       |          |           |
| 00003 | 1.7  | 3.1 | 33.9 | 52.5 | 8.7 | .1                 | .0    | 12.9  | 100.0 | 2350  |          |           |
| 06009 | 1.0  | 3.4 | 36.0 | 52.0 | 7.5 | .2                 | .0    | 12.6  | 100.0 | 3223  |          |           |
| 12015 | 1.4  | 3.4 | 32.2 | 53.9 | 9.0 | .1                 | .0    | 13.1  | 100.0 | 2451  |          |           |
| 18021 | 1.0  | 4.0 | 36.1 | 51.1 | 7.8 | .1                 | .0    | 12.6  | 100.0 | 3339  |          |           |
| TOT   | 137  | 399 | 3951 | 5935 | 929 | 12                 | 0     | 12.7  |       | 11363 |          |           |
| PCT   | 1.2  | 3.5 | 34.8 | 52.2 | 8.2 | .1                 | .0    | 100.0 |       |       |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 20.2 | 3.9  | 4.6  | 2.1          |              | 2.2                    |
| NE       | 34.4 | 8.5  | 11.7 | 5.7          |              | 2.7                    |
| E        | 1.2  | .6   | .7   | .3           |              | 3.2                    |
| SE       | .3   | .1   | .1   | *            |              | 2.9                    |
| S        | .2   | *    | .1   | *            |              | 2.8                    |
| SW       | .5   | .1   | .1   | *            |              | 2.1                    |
| W        | .5   | .1   | .1   | *            |              | 2.0                    |
| NW       | 1.3  | .3   | .4   | .2           |              | 2.7                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.3  | .2   | .1   | .0           |              | 1.2                    |
| TOT OBS  | 2873 | 658  | 857  | 405          | 4793         | 2.5                    |
| TOT PCT  | 59.9 | 13.7 | 17.9 | 8.4          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER | CEILING HEIGHTS (FT, NH >4/8) |            |            |            |              |              |              |              |              |       |      | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------|------|------|------|--------------|--------------|------------------------|-------------------------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|------|--------------------|--------------|
|          |      |      |      |              |              |                        | 000<br>149                    | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ |      |                    |              |
| N        | 20.2 | 3.9  | 4.6  | 2.1          |              | 2.2                    | .1                            | .0         | .1         | .6         | 1.3          | 1.4          | .4           | .1           | .2           | .6    | 26.0 |                    |              |
| NE       | 34.4 | 8.5  | 11.7 | 5.7          |              | 2.7                    | .1                            | *          | .3         | 1.3        | 3.7          | 3.3          | 1.6          | .5           | .3           | 1.4   | 47.9 |                    |              |
| E        | 1.2  | .6   | .7   | .3           |              | 3.2                    | *                             | *          | .0         | *          | .2           | .1           | .1           | .1           | *            | .1    | 2.1  |                    |              |
| SE       | .3   | .1   | .1   | *            |              | 2.9                    | .0                            | .0         | .0         | .0         | .1           | .0           | *            | .0           | .0           | .0    | .3   |                    |              |
| S        | .2   | *    | .1   | *            |              | 2.8                    | .0                            | .0         | .0         | .0         | *            | *            | .0           | .0           | .0           | *     | .3   |                    |              |
| SW       | .5   | .1   | .1   | *            |              | 2.1                    | .0                            | .0         | .0         | .0         | *            | *            | *            | .0           | .0           | *     | .6   |                    |              |
| W        | .5   | .1   | .1   | *            |              | 2.0                    | .0                            | .0         | .0         | *          | *            | .1           | *            | .0           | .0           | .0    | .7   |                    |              |
| NW       | 1.3  | .3   | .4   | .2           |              | 2.7                    | .0                            | .0         | .0         | *          | .1           | .1           | .1           | .1           | *            | *     | 1.8  |                    |              |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     | .0                            | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0   |                    |              |
| CALM     | 1.3  | .2   | .1   | .0           |              | 1.2                    | .0                            | .0         | .0         | *          | *            | *            | *            | .0           | .0           | .0    | 1.5  |                    |              |
| TOT OBS  | 2873 | 658  | 857  | 405          | 4793         | 2.5                    | 12                            | 1          | 18         | 92         | 261          | 244          | 113          | 36           | 25           | 103   | 3888 |                    |              |
| TOT PCT  | 59.9 | 13.7 | 17.9 | 8.4          | 100.0        |                        | .3                            | *          | .4         | 1.9        | 5.4          | 5.1          | 2.4          | .8           | .5           | 2.1   | 81.1 |                    |              |
|          |      |      |      |              |              |                        |                               |            |            |            |              |              |              |              |              |       |      | 4793               |              |
|          |      |      |      |              |              |                        |                               |            |            |            |              |              |              |              |              |       |      | 100.0              |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.4         | 2.5        | 2.6        | 2.6        | 2.6          | 2.6          | 2.6           | 2.6        |
| = OR >5000        | 1.9         | 3.2        | 3.4        | 3.4        | 3.4          | 3.4          | 3.4           | 3.4        |
| = OR >3500        | 3.6         | 5.3        | 5.8        | 5.8        | 5.8          | 5.8          | 5.8           | 5.8        |
| = OR >2000        | 6.5         | 10.0       | 10.8       | 10.8       | 10.8         | 10.8         | 10.8          | 10.8       |
| = OR >1000        | 9.8         | 15.2       | 16.1       | 16.2       | 16.2         | 16.2         | 16.2          | 16.2       |
| = OR >600         | 11.0        | 17.1       | 18.1       | 18.1       | 18.1         | 18.1         | 18.1          | 18.1       |
| = OR >300         | 11.2        | 17.4       | 18.5       | 18.5       | 18.5         | 18.5         | 18.5          | 18.5       |
| = OR >150         | 11.2        | 17.4       | 18.5       | 18.5       | 18.5         | 18.5         | 18.5          | 18.5       |
| = OR >0           | 11.2        | 17.5       | 18.6       | 18.6       | 18.7         | 18.7         | 18.7          | 18.8       |
| TOTAL             | 543         | 846        | 899        | 902        | 904          | 905          | 908           | 909        |

TOTAL NUMBER OF OBS: 4844

PCT FREQ NH &lt;5/8: 81.2

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-------|--------------|
| 43.0 | 14.3 | 10.8 | 7.6 | 5.0 | 3.6 | 4.5 | 4.8 | 6.2 | .2    | 5055         |

SEPTEMBER

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973

TABLE 8

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N         | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-----------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0        | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | * .1      | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .1           |
|              | TOT %  | * .1      | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .1           |
| 1/2<1        | PCP    | .0        | .0   | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     | .8           |
|              | NO PCP | .3 .4     | .1   | *   | .0 | .0 | .0 | *   | *   | .0  | .0   | .0    | .9           |
|              | TOT %  | .3 .4     | .1   | *   | .0 | .0 | .0 | *   | *   | .0  | .0   | .0    | .9           |
| 1<2          | PCP    | .0        | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .2 .5     | *    | .1  | *  | *  | *  | .0  | *   | .0  | .0   | .0    | .9           |
|              | TOT %  | .2 .5     | *    | .1  | *  | *  | *  | .0  | *   | .0  | .0   | .0    | .9           |
| 2<5          | PCP    | .0        | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    | .3           |
|              | NO PCP | 1.2 1.7   | *    | .0  | .0 | .0 | .0 | *   | *   | .0  | *    | 3.0   | 5.9          |
|              | TOT %  | 1.2 1.8   | *    | .0  | .0 | .0 | .0 | *   | *   | .0  | *    | 3.1   | 6.2          |
| 5<10         | PCP    | .1        | .2   | *   | *  | *  | .0 | .0  | *   | .0  | .0   | .3    | .3           |
|              | NO PCP | 9.7 17.4  | .8   | .2  | .2 | .3 | .2 | .4  | .0  | .2  | 29.2 | 29.6  | 58.4         |
|              | TOT %  | 9.7 17.6  | .9   | .2  | .2 | .3 | .2 | .4  | .0  | .2  | 29.6 | 29.6  | 58.4         |
| 10+          | PCP    | *         | .1   | .1  | *  | .0 | .0 | .0  | *   | .0  | .0   | .2    | .2           |
|              | NO PCP | 19.3 39.1 | 2.2  | .3  | .3 | .5 | .6 | 1.7 | .0  | 1.2 | 65.2 | 65.4  | 128.8        |
|              | TOT %  | 19.3 39.3 | 2.2  | .4  | .3 | .5 | .6 | 1.7 | .0  | 1.2 | 65.4 | 65.4  | 128.8        |
| TOT OBS      |        |           |      |     |    |    |    |     |     |     |      |       | 5864         |
| TOT PCT      |        | 30.9      | 59.6 | 3.3 | .6 | .5 | .8 | .8  | 2.1 | .0  | 1.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    | .1           |
|              | 11-21      | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     | *            |
|              | 22+        | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     | *            |
|              | TOT %      | *    | .1   | .0  | .0 | *  | .0 | .0 | .0  | .0  | .0   | .1    | .1           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .1   | .1   | *   | *  | .0 | .0 | *  | .0  | .0  | .0   | .2    | .2           |
|              | 11-21      | .1   | .2   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .4    | .4           |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | *  | *   | .0  | .0   | *     | *            |
|              | TOT %      | .2   | .3   | .1  | *  | .0 | .0 | *  | *   | .0  | .0   | .7    | .7           |
| 1<2          | 0-3        | .0   | .0   | *   | .0 | .0 | .0 | *  | *   | .0  | .0   | *     | *            |
|              | 4-10       | .1   | .1   | *   | *  | .0 | .0 | .0 | *   | .0  | .0   | .3    | .3           |
|              | 11-21      | .1   | .3   | *   | *  | .0 | .0 | .0 | *   | .0  | .0   | .5    | .5           |
|              | 22+        | *    | *    | .0  | *  | *  | .0 | .0 | .0  | .0  | .0   | *     | *            |
|              | TOT %      | .2   | .5   | *   | *  | *  | .0 | .1 | .0  | .0  | .0   | .8    | .8           |
| 2<5          | 0-3        | *    | *    | .0  | *  | .0 | .0 | *  | *   | .0  | .1   | .2    | .2           |
|              | 4-10       | .3   | .4   | *   | *  | .0 | .0 | .0 | .0  | .0  | .0   | .7    | .7           |
|              | 11-21      | .6   | 1.2  | .1  | *  | .0 | .0 | .0 | *   | .0  | .0   | 1.9   | 1.9          |
|              | 22+        | .2   | .4   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .6    | .6           |
|              | TOT %      | 1.1  | 2.0  | .1  | *  | .0 | .0 | *  | *   | .0  | .1   | 3.4   | 3.4          |
| 5<10         | 0-3        | .3   | .2   | *   | *  | .1 | .1 | *  | .1  | .0  | .2   | 1.0   | 1.0          |
|              | 4-10       | 2.3  | 3.4  | .4  | .1 | .1 | .1 | .1 | .1  | .0  | .0   | 6.7   | 6.7          |
|              | 11-21      | 5.0  | 10.6 | .6  | .1 | .1 | *  | *  | .1  | .0  | .0   | 16.5  | 16.5         |
|              | 22+        | .9   | 2.6  | *   | *  | .0 | .0 | .0 | .0  | .0  | .0   | 3.6   | 3.6          |
|              | TOT %      | 8.5  | 16.9 | 1.1 | .2 | .2 | .2 | .1 | .3  | .0  | .2   | 27.8  | 27.8         |
| 10+          | 0-3        | .9   | .7   | .1  | .1 | .1 | .1 | .2 | .3  | .0  | 1.0  | 3.4   | 3.4          |
|              | 4-10       | 7.7  | 12.9 | 1.2 | .1 | .1 | .2 | .5 | 1.1 | .0  | .0   | 23.8  | 23.8         |
|              | 11-21      | 8.7  | 24.9 | 1.2 | .1 | .1 | .1 | .1 | .2  | .0  | .0   | 35.4  | 35.4         |
|              | 22+        | 1.1  | 3.5  | .1  | .0 | .0 | .0 | *  | *   | .0  | .0   | 4.7   | 4.7          |
|              | TOT %      | 18.3 | 42.0 | 2.6 | .3 | .3 | .5 | .7 | 1.6 | .0  | 1.0  | 67.2  | 67.2         |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |       | 8265         |
| TOT PCT      |            | 28.5 | 61.7 | 4.0 | .5 | .5 | .7 | .8 | 2.0 | .0  | 1.3  | 100.0 |              |

## SEPTEMBER

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003          | .4         | .0         | .2         | 2.0        | 4.5          | 3.8          | 1.3          | .7           | .5           | 1.4   | 14.8  | 85.2                | 1225         |
| 06009          | .4         | .0         | .8         | 3.3        | 9.5          | 6.3          | 3.5          | .8           | .5           | 2.4   | 27.5  | 72.5                | 1161         |
| 12015          | .2         | .1         | .4         | 1.7        | 4.9          | 5.8          | 2.7          | 1.1          | .4           | 2.4   | 19.5  | 80.5                | 1319         |
| 18021          | .0         | .0         | .2         | .6         | 2.6          | 3.9          | 1.8          | .4           | .7           | 2.0   | 12.2  | 87.8                | 1290         |
| TOT            | 12         | 1          | 19         | 94         | 262          | 246          | 115          | 36           | 26           | 103   | 914   | 4081                | 4995         |
| PCT            | .2         | *          | .4         | 1.9        | 5.2          | 4.9          | 2.3          | .7           | .5           | 2.1   | 18.3  | 81.7                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .6    | .6  | 2.8 | 26.3 | 69.7 | 1862         |
| 06009          | .2   | 1.0   | 1.0 | 2.4 | 27.9 | 67.4 | 2219         |
| 12015          | .2   | .3    | .9  | 4.2 | 27.1 | 67.4 | 1944         |
| 18021          | *    | .6    | .8  | 4.0 | 29.7 | 64.8 | 2337         |
| TOT            | 10   | 55    | 70  | 279 | 2330 | 5618 | 8362         |
| PCT            | .1   | .7    | .8  | 3.3 | 27.9 | 67.2 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 3+ | TOTAL<br>OBS |
|----------------|--------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .4           | .6         | 5.0         | 11.9            | 83.1               | 1185         |
| 06009          | .4           | 1.3        | 7.0         | 22.9            | 70.1               | 1124         |
| 12015          | .2           | .8         | 6.4         | 15.9            | 77.7               | 1290         |
| 18021          | .0           | .2         | 5.2         | 10.8            | 84.3               | 1245         |
| TOT            | 12           | 35         | 286         | 737             | 3821               | 4844         |
| PCT            | .2           | .7         | 5.9         | 15.2            | 78.9               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | 1            | *           |
| 85/89  | .0   | .0    | *     | .0    | .1    | *     | .0    | .0     | 5            | .1          |
| 80/84  | .0   | .0    | *     | .1    | .2    | .6    | .3    | *      | 58           | 1.2         |
| 75/79  | .0   | .0    | *     | .1    | 1.2   | 6.3   | 4.9   | 1.1    | 641          | 13.0        |
| 70/74  | .0   | .0    | .0    | .1    | 1.1   | 14.0  | 38.4  | 19.2   | 3425         | 72.8        |
| 65/69  | .0   | .0    | .0    | .0    | *     | .6    | 6.1   | 5.5    | 576          | 12.2        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | *      | 1            | *           |
| TOTAL  | 0    | 0     | 3     | 10    | 124   | 1014  | 2339  | 1217   | 4707         | 100.0       |
| PCT    | .0   | .0    | .1    | .2    | 2.6   | 21.5  | 49.7  | 25.9   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| .4   | .6   | .1  | *  | *  | *  | *  | .1  | .0  | .0   |
| 4.5  | 7.7  | .4  | .1 | .1 | .1 | .2 | .5  | .0  | .1   |
| 21.1 | 45.5 | 2.2 | .4 | .3 | .5 | .6 | 1.5 | .0  | .8   |
| 4.0  | 7.5  | .3  | *  | *  | .1 | *  | .1  | .0  | .2   |
| .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 30.1 | 61.5 | 2.9 | .5 | .4 | .7 | .8 | 2.1 | .0  | 1.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 85  | 77  | 75  | 72  | 68 | 66 | 63  | 71.5 | 2361         |
| 06009          | 83  | 78  | 76  | 72  | 68 | 66 | 57  | 71.7 | 3226         |
| 12015          | 90  | 82  | 80  | 74  | 69 | 67 | 57  | 74.2 | 2384         |
| 18021          | 88  | 82  | 79  | 73  | 70 | 68 | 59  | 73.8 | 3257         |
| TOT            | 90  | 81  | 78  | 73  | 68 | 66 | 57  | 72.8 | 11228        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | 1.2   | 11.1  | 50.5  | 37.2   | 87   | 1184         |
| 06009          | .0   | .2    | 1.1   | 14.6  | 48.9  | 35.3   | 86   | 1180         |
| 12015          | .0   | .8    | 5.3   | 34.7  | 47.5  | 11.8   | 81   | 1180         |
| 18021          | .0   | .2    | 3.0   | 25.5  | 51.9  | 19.4   | 83   | 1222         |
| TOT            | 0    | 13    | 127   | 1024  | 2369  | 1233   | 84   | 4766         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973

# SEPTEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .1       | *        | *        | *        | 7     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | *        | .1       | .2       | .1       | .0       | 20    | *        | .4        |
| 9/10               | .0       | .0       | *        | .2       | .4       | .2       | *        | .0       | 43    | *        | .8        |
| 7/8                | .0       | *        | .1       | .8       | .6       | .3       | .0       | .0       | 101   | .1       | 1.8       |
| 6                  | .0       | .0       | .2       | .7       | .5       | .1       | .0       | .0       | 76    | .1       | 1.4       |
| 5                  | .0       | .1       | .6       | 1.8      | 1.0      | .1       | .0       | .0       | 191   | .2       | 3.5       |
| 4                  | .0       | .2       | 1.5      | 2.4      | .9       | .1       | .0       | .0       | 264   | .4       | 4.6       |
| 3                  | .0       | .3       | 3.6      | 4.2      | .8       | .0       | .0       | .0       | 466   | .2       | 8.7       |
| 2                  | .0       | .8       | 6.5      | 5.3      | .8       | *        | .0       | .0       | 706   | .4       | 13.1      |
| 1                  | .0       | 1.2      | 9.3      | 6.6      | .3       | .0       | .0       | .0       | 916   | .4       | 17.0      |
| 0                  | .1       | 1.7      | 10.1     | 6.2      | .2       | .1       | .0       | .0       | 961   | .5       | 17.8      |
| -1                 | *        | .7       | 8.4      | 4.7      | .1       | *        | .0       | .0       | 728   | .2       | 13.7      |
| -2                 | *        | .5       | 4.7      | 1.8      | .1       | .0       | .0       | .0       | 370   | .2       | 6.9       |
| -3                 | *        | .3       | 2.2      | .7       | *        | .0       | .0       | .0       | 169   | .1       | 2.1       |
| -4                 | .1       | .3       | 1.3      | .3       | *        | .0       | .0       | .0       | 105   | *        | 2.0       |
| -5                 | .1       | .2       | .7       | .1       | .0       | .0       | .0       | .0       | 58    | .0       | 1.1       |
| -6                 | .0       | .1       | .3       | .0       | .0       | .0       | .0       | .0       | 19    | *        | .3        |
| -7/-8              | *        | .1       | .1       | *        | .0       | .0       | .0       | .0       | 17    | .0       | .3        |
| -9/-10             | .1       | .1       | .1       | *        | *        | .0       | .0       | .0       | 15    | *        | .3        |
| -11/-13            | .1       | *        | *        | .0       | .0       | .0       | .0       | .0       | 5     | .0       | .1        |
| -14/-16            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 32       |          | 2610     |          | 308      |          | 9        |          | 5241  | 159      | 5082      |
| PCT                | .6       | 6.6      | 49.8     | 35.8     | 5.9      | 1.1      | .2       | *        | 100.0 | 3.0      | 97.0      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | 1.8  | .3    | .0    | .0    | .0  | 2.7  | .4  | 1.6  | .3    | .0    | .0    | .0  | 2.2  |
| 1-2     | .4  | 5.1  | 2.5   | .0    | .0    | .0  | 8.0  | .3  | 6.5  | 5.3   | .0    | .0    | .0  | 12.0 |
| 3-4     | .1  | 3.0  | 6.2   | .3    | .0    | .0  | 9.6  | .1  | 3.7  | 13.2  | .9    | .0    | .0  | 17.9 |
| 5-6     | .0  | .9   | 5.4   | .7    | .0    | .0  | 7.0  | .0  | 1.1  | 11.4  | 2.4   | .0    | .0  | 15.0 |
| 7       | .0  | .1   | 2.4   | 1.0   | .0    | .0  | 3.5  | .0  | .2   | 5.0   | 2.3   | .0    | .0  | 7.5  |
| 8-9     | .0  | *    | .8    | .7    | .0    | .0  | 1.5  | .0  | *    | 2.0   | 1.7   | .0    | .0  | 3.7  |
| 10-11   | .0  | .0   | *     | .4    | .0    | .0  | .4   | .0  | .0   | .5    | .7    | .0    | .0  | 1.2  |
| 12      | .0  | .0   | *     | .1    | .0    | .0  | .2   | .0  | *    | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.0 | 10.8 | 17.7  | 3.3   | .0    | .0  | 32.8 | .8  | 13.1 | 37.7  | 8.2   | .0    | .0  | 59.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | *   | .5   | .1    | .0    | .0    | .0  | .7  | *   | .0   | .0    | .0    | .0    | .0  | *   |
| 3-4     | .0  | .3   | .3    | *     | .0    | .0  | .7  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 5-6     | .0  | *    | .2    | .0    | .0    | .0  | .3  | .0  | *    | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 1.2  | .7    | *     | .0    | .0  | 2.1 | .1  | .2   | .1    | *     | .0    | .0  | .4  |

PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER  
TABLE 18 (CONT)AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

## PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | *    | .0    | .0    | .0    | .0  | .1  | .1  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 5-6     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .1  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .1   | .1    | *     | .0    | .0  | .3  | .1  | .2   | .1    | .0    | .0    | .0  | .4  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .2  | .4   | .0    | .0    | .0    | .0  | .5  |           |
| 1-2     | *   | .3   | .0    | .0    | .0    | .0  | .3  | .1  | .6   | .1    | .0    | .0    | .0  | .8  |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | *     | .0    | .0  | .1  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | .4   | .0    | .0    | .0    | .0  | .5  | .3  | 1.0  | .3    | .1    | .0    | .0  | 1.7 | 98.0      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.9 | 4.4  | .6    | .0    | .0    | .0  | 8.8   |         |
| 1-2     | 1.1 | 13.1 | 7.9   | .0    | .0    | .0  | 22.1  |         |
| 3-4     | .2  | 7.1  | 19.8  | 1.3   | .0    | .0  | 28.4  |         |
| 5-6     | .0  | 2.1  | 17.1  | 3.2   | .0    | .0  | 22.3  |         |
| 7       | .0  | .2   | 7.5   | 3.3   | .0    | .0  | 11.1  |         |
| 8-9     | .0  | .1   | 2.7   | 2.3   | .0    | .0  | 5.1   |         |
| 10-11   | .0  | .0   | .6    | 1.0   | .0    | .0  | 1.6   |         |
| 12      | .0  | *    | .2    | .2    | .0    | .0  | .4    |         |
| 13-16   | .0  | .0   | *     | .1    | .0    | .0  | .2    |         |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.2 | 26.9 | 56.4  | 11.5  | .0    | .0  | 100.0 | 3079    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

## PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 1.6 | 7.0  | 12.2 | 8.3  | 4.1  | 2.2 | .6    | .1  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1358  | 4        |
| 6-7          | *   | 1.0  | 5.9  | 8.6  | 6.2  | 3.2 | 1.4   | .4  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1016  | 6        |
| 8-9          | .0  | .4   | 1.6  | 2.7  | 3.3  | 1.9 | .8    | .2  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 422   | 6        |
| 10-11        | .0  | .3   | .7   | .8   | .6   | .2  | .3    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 115   | 6        |
| 12-13        | .0  | .0   | .6   | .3   | .4   | .2  | .4    | .1  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 81    | 7        |
| >13          | .0  | .0   | .0   | .2   | .1   | .1  | .1    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 18    | 8        |
| INDET        | 3.3 | 3.4  | 4.9  | 3.3  | 2.5  | 1.6 | .7    | .3  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 758   | 4        |
| TOTAL        | 186 | 452  | 977  | 910  | 651  | 353 | 164   | 47  | 22    | 6     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 3768  | 5        |
| PCT          | 4.9 | 12.0 | 25.9 | 24.2 | 17.3 | 9.4 | 4.4   | 1.2 | .6    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

OCTOBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGD WD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .3                 | .2        | .2   | .0        | .0   | .0              | .0   | .7                      | .4             | .8        | 1.2         | .1                  | 1.7        | .5              | 94.6       |
| NE       | .4                 | .2        | .2   | .0        | .0   | .0              | *    | .9                      | .4             | .4        | 1.3         | *                   | 1.7        | .2              | 95.2       |
| E        | .4                 | .1        | .0   | .0        | .0   | .0              | .0   | .6                      | .6             | 1.0       | 1.2         | .3                  | 1.5        | .0              | 94.8       |
| SE       | .0                 | 1.0       | .0   | .0        | .0   | .0              | .0   | 1.0                     | 1.5            | 1.0       | 3.9         | .0                  | .0         | .0              | 92.5       |
| S        | .0                 | 6.5       | .5   | .0        | .0   | .0              | .0   | 6.9                     | 2.3            | 1.9       | 4.9         | .0                  | .9         | .0              | 83.1       |
| SW       | .2                 | 2.2       | .3   | .0        | .0   | .0              | .0   | 2.7                     | 2.7            | 1.3       | .6          | .0                  | .6         | .0              | 92.2       |
| W        | 1.4                | 1.6       | .8   | .0        | .0   | .0              | .0   | 3.8                     | 1.5            | 2.0       | 1.8         | .0                  | 1.1        | .0              | 90.2       |
| NW       | .4                 | .5        | .2   | .0        | .0   | .0              | .0   | 1.0                     | .4             | .2        | .5          | .0                  | 1.2        | .0              | 96.7       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .5             | 2.1       | 1.1         | .0                  | .0         | .0              | 96.3       |
| TOT PCT  | .4                 |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |
| TOT OBS: | 6309               | .4        | .2   | .0        | .0   | .0              | *    | 1.0                     | .6             | .7        | 1.3         | *                   | 1.5        | .2              | 94.7       |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGD WD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .2                 | .5        | .3   | .0        | .0   | .0              | .0   | .7                      | .4             | 1.1       | .9          | .1                  | 1.1        | .2              | 95.2       |
| 06009      | .5                 | .6        | .3   | .0        | .0   | .0              | .0   | 1.4                     | .6             | 1.5       | 1.1         | .1                  | .8         | .1              | 94.5       |
| 12015      | .4                 | .4        | .1   | .0        | .0   | .0              | .1   | .9                      | .7             | .0        | 1.8         | .1                  | 2.0        | .3              | 94.2       |
| 18021      | .4                 | .4        | .1   | .0        | .0   | .0              | .0   | .9                      | .5             | .3        | 1.4         | .0                  | 2.0        | .4              | 94.5       |
| TOT PCT    | .4                 |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |
| TOT OBS:   | 6552               | .5        | .2   | .0        | .0   | .0              | *    | 1.1                     | .5             | .7        | 1.3         | *                   | 1.5        | .2              | 94.6       |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 2.4                | 12.6 | 7.5   | .6    | *     | .0  |       | 23.1      | 9.5      |          | 27.0       | 25.2  | 22.9  | 17.5  | 18.6  | 18.8  | 26.3  | 25.5  |
| NE       | 1.7                | 22.3 | 26.1  | 2.5   | *     | .0  |       | 52.7      | 11.9     |          | 49.7       | 58.2  | 53.3  | 54.6  | 55.8  | 61.4  | 50.8  | 50.2  |
| E        | .5                 | 3.8  | 2.5   | .2    | *     | .0  |       | 7.0       | 9.8      |          | 5.2        | 4.2   | 7.1   | 10.0  | 8.9   | 4.1   | 5.9   | 6.3   |
| SE       | .3                 | 1.0  | .2    | *     | .0    | .0  |       | 1.5       | 6.8      |          | 1.2        | 1.4   | 1.4   | 2.3   | 2.0   | .6    | 1.4   | 1.1   |
| S        | .4                 | 1.0  | .2    | *     | .0    | .0  |       | 1.6       | 6.9      |          | 1.5        | .5    | 1.7   | 2.0   | 1.7   | 1.2   | 1.7   | 1.3   |
| SW       | .6                 | 1.7  | .6    | *     | .0    | .0  |       | 2.9       | 7.6      |          | 3.2        | .0    | 3.0   | 2.9   | 2.8   | .0    | 3.0   | 3.1   |
| W        | .7                 | 2.0  | .6    | *     | .0    | .0  |       | 3.4       | 7.4      |          | 3.7        | 1.6   | 3.7   | 3.8   | 3.2   | 4.7   | 2.7   | 3.5   |
| NW       | 1.0                | 3.2  | .7    | *     | .0    | .0  |       | 5.0       | 6.9      |          | 4.7        | 3.3   | 4.1   | 4.8   | 4.6   | 6.2   | 6.0   | 6.2   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.8                |      |       |       |       |     |       | 2.8       | .0       |          | 3.9        | 5.7   | 2.9   | 2.0   | 2.3   | 3.0   | 2.3   | 2.9   |
| TOT OBS  | 1282               | 5890 | 4727  | 414   | 7     | 1   | 12261 |           | 10.2     |          | 2287       | 159   | 2349  | 1195  | 2599  | 166   | 2367  | 1139  |
| TOT PCT  | 10.5               | 47.5 | 38.6  | 3.4   | .1    | *   |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 03    | 06    | 18    |
| N        | 7.8                | 12.8 | 2.4   | .1    | .0  |           | 23.1     | 9.5      | 26.9       | 21.1  | 18.6  | 26.0  |
| NE       | 8.8                | 33.0 | 10.5  | .4    | *   |           | 52.7     | 11.9     | 50.2       | 53.8  | 56.2  | 50.6  |
| E        | 2.2                | 4.0  | .9    | *     | *   |           | 7.0      | 9.8      | 5.2        | 8.1   | 8.7   | 6.0   |
| SE       | .8                 | .7   | *     | .0    | .0  |           | 1.5      | 6.8      | 1.2        | 1.7   | 2.0   | 1.3   |
| S        | .9                 | .7   | *     | .0    | .0  |           | 1.6      | 6.9      | 1.4        | 1.8   | 1.7   | 1.6   |
| SW       | 1.4                | 1.3  | .1    | *     | .0  |           | 2.9      | 7.6      | 3.0        | 2.9   | 2.6   | 3.0   |
| W        | 1.8                | 1.4  | .2    | *     | .0  |           | 3.4      | 7.4      | 3.5        | 3.7   | 3.3   | 2.9   |
| NW       | 2.8                | 2.0  | .1    | .0    | *   |           | 5.0      | 6.9      | 4.6        | 4.4   | 4.7   | 6.0   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 2.8                |      |       |       |     |           | 2.8      | .0       | 4.0        | 2.6   | 2.4   | 2.5   |
| TOT OBS  | 3595               | 6844 | 1755  | 64    | 3   | 12261     |          | 10.2     | 2446       | 3544  | 2765  | 3506  |
| TOT PCT  | 29.3               | 55.8 | 14.3  | .5    | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

OCTOBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+  | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|------|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |      |       |          |           |
| 00003 | 4.0  | 8.3 | 46.4 | 37.5               | 3.6   | .2    | .0 | 10.1 | 100.0 | 2446     |           |
| 06009 | 2.6  | 6.8 | 47.9 | 39.2               | 3.4   | .1    | *  | 10.3 | 100.0 | 3544     |           |
| 12015 | 2.4  | 7.3 | 47.2 | 39.3               | 3.8   | .0    | .0 | 10.3 | 100.0 | 2765     |           |
| 18021 | 2.5  | 8.3 | 48.3 | 38.0               | 2.8   | .0    | .0 | 10.0 | 100.0 | 3506     |           |
| TOT   | 342  | 940 | 5830 | 4727               | 414   | 7     | 1  | 10.2 |       | 12261    |           |
| PCT   | 2.8  | 7.7 | 47.5 | 38.6               | 3.4   | .1    | *  |      | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 17.1 | 3.9  | 3.3  | 1.3          |              | 2.0                    |
| NE       | 32.9 | 9.1  | 8.9  | 2.6          |              | 2.3                    |
| E        | 2.3  | .8   | 1.4  | .4           |              | 3.3                    |
| SE       | .6   | .3   | .3   | .1           |              | 3.3                    |
| S        | .6   | .3   | .5   | .1           |              | 3.5                    |
| SW       | 1.2  | .4   | .5   | .1           |              | 2.8                    |
| W        | 1.4  | .5   | .5   | .1           |              | 2.7                    |
| NW       | 2.9  | 1.0  | .8   | .2           |              | 2.5                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 2.4  | .3   | .4   | .2           |              | 1.9                    |
| TOT OBS  | 3105 | 845  | 839  | 267          | 5056         | 2.3                    |
| TOT PCT  | 61.4 | 16.7 | 16.6 | 5.3          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| N       | .1  | *   | *   | .2  | .8   | 1.1  | .4   | .1   | .1   | .2    | 22.5               |              |
| NE      | .1  | *   | .1  | .4  | 2.4  | 2.2  | .9   | .4   | .3   | .6    | 46.1               |              |
| E       | .0  | .0  | .0  | .2  | .3   | .4   | .2   | *    | *    | .1    | 3.8                |              |
| SE      | .0  | .0  | .0  | *   | .1   | *    | *    | *    | *    | .0    | 1.1                |              |
| S       | .0  | .0  | .0  | .1  | *    | .1   | .1   | .0   | *    | *     | 1.1                |              |
| SW      | .0  | .0  | *   | .1  | .1   | .1   | .1   | *    | *    | *     | 1.9                |              |
| W       | *   | .0  | .0  | .0  | .1   | .1   | .0   | .1   | .0   | .0    | 2.2                |              |
| NW      | *   | .0  | *   | .1  | .1   | .2   | *    | *    | *    | .1    | 4.3                |              |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| CALM    | .0  | .0  | *   | .0  | .1   | .1   | .1   | *    | *    | .1    | 2.7                |              |
| TOT OBS | 10  | 5   | 11  | 56  | 205  | 221  | 87   | 35   | 26   | 58    | 4342               | 5056         |
| TOT PCT | .2  | .1  | .2  | 1.1 | 4.1  | 4.4  | 1.7  | .7   | .5   | 1.1   | 85.9               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.3       | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7   | 1.7  |
| >5000             | 1.8       | 2.4  | 2.4  | 2.4  | 2.4  | 2.4  | 2.4   | 2.4  |
| >3500             | 3.0       | 4.0  | 4.1  | 4.1  | 4.1  | 4.1  | 4.1   | 4.1  |
| >2000             | 5.9       | 8.2  | 8.4  | 8.4  | 8.4  | 8.4  | 8.4   | 8.4  |
| >1000             | 9.3       | 12.0 | 12.4 | 12.4 | 12.5 | 12.5 | 12.5  | 12.5 |
| >600              | 10.1      | 13.1 | 13.5 | 13.5 | 13.6 | 13.6 | 13.6  | 13.6 |
| >300              | 10.2      | 13.3 | 13.7 | 13.8 | 13.8 | 13.8 | 13.8  | 13.8 |
| >150              | 10.2      | 13.3 | 13.8 | 13.8 | 13.8 | 13.9 | 13.9  | 13.9 |
| >0                | 10.2      | 13.3 | 13.8 | 13.9 | 14.0 | 14.0 | 14.1  | 14.1 |
| TOTAL             | 592       | 694  | 722  | 725  | 729  | 732  | 733   | 733  |

TOTAL NUMBER OF OBS: 5213

PCT FREQ NH <5/8: 85.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|--|------|------|------|-----|-----|-----|-----|-----|-----|-------|--------------|
|  | 40.5 | 17.2 | 13.9 | 8.5 | 5.2 | 3.5 | 4.2 | 3.1 | 3.8 | .2    | 5489         |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1955-1973

OCTOBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .1   | *    | *   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .1           |
|              | TOT %  | .1   | *    | *   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .1           |
| 1/2<1        | PCP    | *    | *    | .0  | *   | *   | *   | *   | .0  | .0  | .0   | .0    | .1           |
|              | NO PCP | .1   | .1   | .0  | *   | .1  | *   | *   | .0  | .0  | .0   | .0    | .3           |
|              | TOT %  | .1   | .2   | .0  | *   | .1  | *   | *   | .0  | .0  | .0   | .0    | .4           |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .1   | .1   | .1  | .0  | .0  | .0  | *   | *   | .0  | .0   | .0    | .3           |
|              | TOT %  | .1   | .1   | .1  | .0  | .0  | .0  | *   | *   | .0  | .0   | .0    | .3           |
| 2<5          | PCP    | *    | *    | .0  | .0  | .0  | .0  | *   | *   | .0  | .0   | *     | *            |
|              | NO PCP | .5   | .7   | *   | *   | *   | *   | *   | *   | .0  | .1   | 1.3   |              |
|              | TOT %  | .5   | .7   | *   | *   | *   | *   | *   | *   | .0  | .1   | 1.4   |              |
| 5<10         | PCP    | .1   | .2   | *   | *   | .1  | *   | .1  | *   | .0  | .0   | .6    |              |
|              | NO PCP | 5.8  | 10.8 | 1.2 | .3  | .3  | .5  | .6  | 1.0 | .0  | .4   | 20.9  |              |
|              | TOT %  | 5.9  | 11.1 | 1.3 | .3  | .4  | .6  | .7  | 1.0 | .0  | .4   | 21.5  |              |
| 10+          | PCP    | .1   | .2   | *   | .0  | *   | *   | *   | *   | .0  | .0   | .3    |              |
|              | NO PCP | 19.0 | 39.9 | 4.0 | 1.2 | 1.2 | 1.9 | 2.1 | 4.1 | .0  | 2.6  | 76.0  |              |
|              | TOT %  | 19.0 | 40.1 | 4.0 | 1.2 | 1.3 | 1.9 | 2.1 | 4.1 | .0  | 2.6  | 76.3  |              |
| TOT OBS      |        |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |     |     |     |      |       |              |
|              |        | 25.7 | 52.2 | 5.4 | 1.5 | 1.7 | 2.5 | 2.9 | 5.1 | .0  | 3.0  | 100.0 | 6305         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | .0  | .0  | *   | *   | *   | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .0   | *    | *   | *   | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | *    | *   | *   | *   | *   | *   | .0  | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | *    | *    | .0  | *   | .0  | *   | *   | .0  | .0  | .0   | *     |              |
|              | 4-10       | *    | .1   | .0  | *   | *   | *   | *   | .0  | .0  | .0   | .2    |              |
|              | 11-21      | *    | .1   | .0  | *   | *   | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | .1   | .0  | *   | .1  | *   | *   | .0  | .0  | .0   | .3    |              |
| 1<2          | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | .1   | *   | .0  | .0  | .0  | *   | .0  | .0  | .0   | .2    |              |
|              | 11-21      | *    | .1   | *   | .0  | .0  | .0  | .0  | *   | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .2   | *   | .0  | .0  | .0  | *   | *   | .0  | .0   | .3    |              |
| 2<5          | 0-3        | .1   | *    | *   | .0  | .0  | .0  | .0  | *   | .0  | *    | .2    |              |
|              | 4-10       | .2   | .2   | *   | *   | *   | *   | *   | *   | .0  | .0   | .7    |              |
|              | 11-21      | .2   | .4   | *   | *   | .0  | .0  | *   | *   | .0  | .0   | .1    |              |
|              | 22+        | *    | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .5   | .8   | .1  | *   | *   | *   | *   | *   | .0  | *    | 1.5   |              |
| 5<10         | 0-3        | .4   | .3   | .1  | .1  | .1  | .1  | .1  | .1  | .0  | .3   | 1.6   |              |
|              | 4-10       | 2.6  | 3.5  | .6  | .1  | .2  | .3  | .3  | .5  | .0  | .0   | 8.1   |              |
|              | 11-21      | 2.1  | 6.0  | .5  | *   | *   | .1  | .1  | .2  | .0  | .0   | 9.0   |              |
|              | 22+        | .2   | .7   | *   | .0  | .0  | .0  | *   | *   | .0  | .0   | 1.0   |              |
|              | TOT %      | 5.3  | 10.5 | 1.3 | .2  | .3  | .5  | .5  | .8  | .0  | .3   | 19.7  |              |
| 10+          | 0-3        | 1.9  | 1.4  | .4  | .2  | .2  | .3  | .5  | .7  | .0  | 2.5  | 8.1   |              |
|              | 4-10       | 10.2 | 17.4 | 2.5 | .8  | .7  | 1.2 | 1.4 | 2.6 | .0  | .0   | 37.0  |              |
|              | 11-21      | 6.0  | 21.2 | 1.7 | .1  | .2  | .3  | .3  | .6  | .0  | .0   | 30.5  |              |
|              | 22+        | .3   | 1.9  | .1  | *   | .0  | *   | *   | *   | .0  | .0   | 2.4   |              |
|              | TOT %      | 18.4 | 41.9 | 4.7 | 1.2 | 1.1 | 1.9 | 2.3 | 4.0 | .0  | 2.5  | 77.9  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |     |     |     |      |       |              |
|              |            | 24.5 | 53.5 | 6.1 | 1.5 | 1.5 | 2.4 | 2.9 | 4.8 | .0  | 2.9  | 100.0 | 8804         |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

OCTOBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|---------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                     |              |
| 00003 | .0  | .2  | .1  | 1.0 | 2.9  | 3.2  | .9   | .4   | .5   | 1.3   | 10.5  | 89.5                | 1269         |
| 06009 | .5  | .1  | .1  | 1.2 | 6.0  | 4.4  | 1.9  | .9   | .6   | .6    | 16.4  | 83.6                | 1291         |
| 12015 | .1  | .1  | .4  | 1.1 | 4.2  | 5.6  | 1.8  | .7   | .5   | 1.4   | 15.9  | 84.1                | 1500         |
| 18021 | .1  | .1  | .2  | .9  | 2.4  | 3.4  | 1.8  | .7   | .4   | 1.3   | 11.3  | 88.7                | 1353         |
| TOT   | 10  | 5   | 11  | 57  | 210  | 228  | 88   | 36   | 28   | 63    | 736   | 4677                | 5413         |
| PCT   | .2  | .1  | .2  | 1.1 | 3.9  | 4.2  | 1.6  | .7   | .5   | 1.2   | 13.6  | 86.4                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HR    | < 1/2 | 1/2 < 1 | 1 < 2 | 2 < 5 | 5 < 10 | 10+  | TOTAL<br>OBS |
|-------|-------|---------|-------|-------|--------|------|--------------|
| (GMT) |       |         |       |       |        |      |              |
| 00003 | .1    | .3      | .3    | 1.3   | 19.4   | 78.7 | 1951         |
| 06009 | .2    | .4      | .4    | 1.5   | 20.9   | 76.5 | 2451         |
| 12015 | .2    | .3      | .2    | 2.0   | 17.7   | 79.5 | 2207         |
| 18021 | .1    | .4      | .5    | 1.2   | 21.2   | 76.7 | 2438         |
| TOT   | 14    | 32      | 30    | 136   | 1798   | 7037 | 9047         |
| PCT   | .2    | .4      | .3    | 1.5   | 19.9   | 77.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HR    | < 150<br>< 500D | < 600<br>< 1 | < 1000<br>< 5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|-------|-----------------|--------------|---------------|-----------------|--------------------|--------------|
| (GMT) |                 |              |               |                 |                    |              |
| 00003 | .0              | .3           | 2.6           | 9.1             | 88.2               | 1217         |
| 06009 | .6              | .8           | 3.2           | 14.6            | 82.2               | 1237         |
| 12015 | .1              | .7           | 3.6           | 13.9            | 82.5               | 1456         |
| 18021 | .1              | .4           | 2.5           | 10.2            | 87.3               | 1303         |
| TOT   | 10              | 29           | 157           | 626             | 4430               | 5213         |
| PCT   | .2              | .6           | 3.0           | 12.0            | 85.0               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | *     | .1    | .1    | .1    | .3    | *     | .1     | 31           | .6          |
| 75/79  | .0   | *     | .4    | 2.0   | 6.3   | 4.1   | .9    | .9     | 682          | 13.7        |
| 70/74  | .0   | .0    | .0    | .2    | 4.3   | 20.1  | 32.5  | 15.5   | 3639         | 72.9        |
| 65/69  | .0   | .0    | .0    | .1    | .2    | 1.9   | 6.5   | 4.1    | 635          | 12.7        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | *     | .1     | 4            | .1          |
| TOTAL  | 0    | 2     | 4     | 34    | 327   | 1426  | 2153  | 1046   | 4992         | 100.0       |
| PCT    | .0   | *     | .1    | .7    | 6.6   | 28.6  | 43.1  | 21.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N     | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|------|
| 85/89 | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 80/84 | .2   | .2   | *   | .0  | .0  | *   | .1  | .0  | .1   |
| 75/79 | 3.3  | 6.7  | .9  | .2  | .5  | .4  | 1.2 | .0  | .3   |
| 70/74 | 17.9 | 38.9 | 4.0 | 1.2 | 1.9 | 2.1 | 3.8 | .0  | 1.9  |
| 65/69 | 3.4  | 8.1  | .4  | .1  | .1  | .1  | .1  | .0  | .4   |
| 60/64 | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| TOTAL | 24.9 | 53.8 | 5.3 | 1.5 | 1.5 | 2.4 | 5.2 | .0  | 2.7  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|----|----|-----|------|--------------|
| (GMT) |     |     |     |     |    |    |     |      |              |
| 00003 | 82  | 77  | 75  | 71  | 68 | 66 | 61  | 71.4 | 2495         |
| 06009 | 84  | 77  | 75  | 72  | 68 | 65 | 54  | 71.4 | 3575         |
| 12015 | 86  | 82  | 79  | 74  | 69 | 68 | 57  | 74.0 | 2738         |
| 18021 | 88  | 81  | 78  | 73  | 69 | 67 | 57  | 73.4 | 3471         |
| TOT   | 88  | 81  | 78  | 72  | 68 | 66 | 54  | 72.5 | 12279        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|-------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| (GMT) |      |       |       |       |       |       |       |        |      |              |
| 00003 | .0   | .4    | 3.7   | 20.6  | 44.5  | 30.8  | 84    | 1222   |      |              |
| 06009 | .0   | .3    | 3.9   | 21.3  | 45.9  | 28.6  | 84    | 1312   |      |              |
| 12015 | .0   | 1.7   | 11.1  | 39.2  | 37.8  | 10.3  | 79    | 1330   |      |              |
| 18021 | .0   | .8    | 7.5   | 32.7  | 43.4  | 15.6  | 81    | 1318   |      |              |
| TOT   | 0    | 42    | 342   | 1484  | 2221  | 1093  | 82    | 5182   |      |              |



## OCTOBER

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 10.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | M<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | .1       | .1       | 9     | *        | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .3       | .2       | .0       | 35    | *        | .6        |
| 9/10               | .0       | .0       | .0       | .1       | .2       | .4       | .1       | *        | 44    | *        | .7        |
| 7/8                | .0       | .0       | .0       | .2       | .7       | .6       | .1       | .0       | 98    | .0       | 1.7       |
| 6                  | .0       | .0       | .0       | .2       | .8       | .4       | *        | .0       | 85    | .1       | 1.4       |
| 5                  | .0       | *        | .1       | .8       | 1.7      | 1.0      | .1       | *        | 216   | .1       | 3.6       |
| 4                  | .0       | .0       | .1       | 1.5      | 2.1      | .6       | *        | .0       | 265   | .1       | 4.4       |
| 3                  | .0       | .0       | .2       | 2.5      | 3.7      | .8       | *        | .0       | 431   | .1       | 7.2       |
| 2                  | .0       | .0       | .9       | 4.9      | 4.9      | .8       | .0       | .0       | 679   | .2       | 11.3      |
| 1                  | .0       | .0       | 1.5      | 7.8      | 6.4      | .3       | .0       | .0       | 937   | .1       | 15.7      |
| 0                  | .0       | .1       | 1.5      | 9.7      | 6.5      | .3       | *        | .0       | 1070  | .3       | 17.8      |
| -1                 | .0       | .1       | .7       | 9.3      | 5.0      | .1       | *        | .0       | 895   | .2       | 14.9      |
| -2                 | .0       | *        | .8       | 6.8      | 1.8      | .1       | .0       | .0       | 558   | .1       | 9.3       |
| -3                 | .0       | .1       | .5       | 3.4      | .7       | *        | .0       | .0       | 278   | *        | 4.7       |
| -4                 | .0       | .1       | .5       | 1.5      | .4       | .1       | .0       | .0       | 149   | *        | 2.5       |
| -5                 | *        | *        | .3       | .8       | .2       | .0       | .0       | .0       | 81    | *        | 1.4       |
| -6                 | .0       | *        | *        | .2       | .1       | .0       | .0       | .0       | 21    | .0       | .4        |
| -7/-8              | .0       | *        | .1       | .4       | .1       | .0       | .0       | .0       | 37    | *        | .6        |
| -9/-10             | .0       | *        | .1       | .1       | .0       | .0       | .0       | .0       | 11    | .0       | .2        |
| -11/-13            | *        | .0       | *        | .1       | .0       | .0       | .0       | .0       | 6     | .0       | .1        |
| -14/-16            | *        | *        | .0       | *        | .0       | .0       | .0       | .0       | 3     | *        | *         |
| TOTAL              | 3        | 428      | 2976     | 2094     | 342      | 7        |          |          | 5910  |          |           |
| PCT                | .1       | .4       | 7.2      | 50.4     | 35.4     | 5.8      | .6       | .1       | 100.0 | 1.4      | 98.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | 1.3 | 2.5  | .1    | .0    | .0    | .0  | 3.4  | .8  | 2.3  | .3    | .0    | .0    | .0  | 3.3  |
| 1-2     | .7  | 7.4  | 1.7   | .0    | .0    | .0  | 7.7  | .4  | 11.4 | 4.9   | .0    | .0    | .0  | 16.7 |
| 3-4     | .1  | 3.4  | 3.6   | .0    | .0    | .0  | 7.0  | .2  | 5.7  | 12.2  | .4    | .0    | .0  | 18.4 |
| 5-6     | .0  | .5   | 2.4   | .3    | *     | .0  | 3.2  | .0  | 1.1  | 7.1   | .6    | *     | .0  | 8.3  |
| 7       | .0  | .0   | 1.1   | .2    | .0    | .0  | 1.3  | .0  | .1   | 2.8   | .7    | .0    | *   | 3.6  |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .3   | .0  | .0   | .9    | .4    | .0    | .0  | 1.3  |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | .3    | .5    | .0    | .0  | .7   |
| 12      | .0  | .0   | *     | .0    | *     | .0  | *    | .0  | .0   | .1    | .2    | *     | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *     | *     | *     | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 2.1 | 13.8 | 9.2   | .7    | *     | .0  | 25.8 | 1.3 | 20.5 | 28.5  | 2.9   | *     | *   | 53.2 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .2  | .5   | *     | .0    | .0    | .0  | .7  | .1  | .2   | .0    | .0    | .0    | .0  | .3  |
| 1-2     | .2  | 1.4  | .5    | .0    | .0    | .0  | 2.1 | .1  | .6   | *     | .0    | .0    | .0  | .7  |
| 3-4     | .0  | .7   | .6    | *     | .0    | .0  | 1.3 | .0  | .1   | *     | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .1   | .4    | .0    | .0    | .0  | .5  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 2.8  | 1.6   | *     | .0    | .0  | 4.8 | .2  | 1.0  | .1    | *     | .0    | .0  | 1.2 |

AD-A031 778

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
NOV 76

F/G 4/2

UNCLASSIFIED

NL

5 of 7

ADA031778

A large grid of 140 small, dark rectangular frames, each containing faint, illegible text or data, arranged in 7 rows and 20 columns. The frames appear to be individual pages or sections of a larger document, possibly containing synoptic meteorological observations as mentioned in the header.

PERIOD: (OVER-ALL) 1963-1973

OCTOBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | *   | .2   | .0    | .0    | .0    | .0  |  | .2  | .1  | .5   | .0    | .0    | .0    | .0  |  | .6  |
| 1-2     | .1  | .7   | *     | .0    | .0    | .0  |  | .7  | *   | .7   | .2    | .0    | .0    | .0  |  | .9  |
| 3-4     | .0  | .2   | *     | .0    | .0    | .0  |  | .2  | *   | .2   | .2    | .0    | .0    | .0  |  | .4  |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  |  | .1  | .0  | .1   | .2    | .0    | .0    | .0  |  | .3  |
| 7       | .0  | *    | .0    | .0    | .0    | .0  |  | *   | .0  | *    | .0    | .0    | .0    | .0  |  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | *    | .0    | .0    | .0    | .0  |  | *   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | *    | .0    | .0    | .0    | .0  |  | *   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .1  | 1.2  | .1    | .0    | .0    | .0  |  | 1.3 | .2  | 1.4  | .6    | .0    | .0    | .0  |  | 2.2 |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .3  | .5   | .0    | .0    | .0    | .0  |  | .8  | .6  | 1.0  | .0    | .0    | .0    | .0  |  | 1.6 |           |
| 1-2     | .1  | .9   | .2    | .0    | .0    | .0  |  | 1.2 | .3  | 1.5  | .2    | .0    | .0    | .0  |  | 2.0 |           |
| 3-4     | .0  | .3   | .1    | *     | .0    | .0  |  | .4  | *   | .6   | .3    | *     | .0    | .0  |  | 1.0 |           |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  |  | .1  | .0  | .1   | .3    | .0    | .0    | .0  |  | .4  |           |
| 7       | .0  | *    | *     | .0    | .0    | .0  |  | .1  | .0  | *    | *     | .0    | .0    | .0  |  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .4  | 1.8  | .4    | *     | .0    | .0  |  | 2.6 | .9  | 3.2  | .9    | *     | .0    | .0  |  | 5.0 | 96.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 8.6  | 7.8  | .4    | .0    | .0    | .0  | 16.7  |         |
| 1-2     | 2.2  | 24.1 | 7.5   | .0    | .0    | .0  | 33.8  |         |
| 3-4     | .3   | 11.1 | 16.6  | .5    | .0    | .0  | 28.4  |         |
| 5-6     | .0   | 1.9  | 10.3  | .9    | *     | .0  | 13.1  |         |
| 7       | .0   | .1   | 4.0   | .9    | .0    | *   | 5.1   |         |
| 8-9     | .0   | .0   | 1.1   | .5    | .0    | .0  | 1.6   |         |
| 10-11   | .0   | .0   | .4    | .5    | .0    | .0  | .9    |         |
| 12      | .0   | *    | .1    | .2    | *     | .0  | .3    |         |
| 13-16   | .0   | *    | *     | *     | *     | .0  | .1    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 11.0 | 45.0 | 40.3  | 3.6   | .1    | *   | 100.0 | 3508    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.3 | 12.4 | 12.3 | 7.3  | 2.3  | .6  | .1    | *  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1366  | 3        |
| 6-7          | .0  | 1.6  | 6.3  | 6.9  | 4.4  | 1.8 | .4    | .2 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 902   | 5        |
| 8-9          | .0  | .8   | 2.2  | 3.3  | 2.2  | 1.1 | .7    | .1 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 442   | 6        |
| 10-11        | .0  | .8   | 1.0  | .9   | .6   | .3  | .2    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 162   | 5        |
| 12-13        | .0  | .0   | 1.2  | .5   | .3   | .1  | .1    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100   | 5        |
| >13          | .0  | .0   | .0   | .5   | .1   | *   | .0    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 31    | 6        |
| INDET        | 5.2 | 5.7  | 5.3  | 4.3  | 1.7  | .6  | .4    | .1 | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 981   | 3        |
| TOTAL        | 315 | 890  | 1182 | 990  | 494  | 186 | 85    | 27 | 12    | 2     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4184  | 4        |
| PCT          | 7.5 | 21.3 | 28.3 | 23.7 | 11.8 | 4.4 | 2.0   | .6 | .3    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1894-1973

# NOVEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WNO DIR            | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | .6   | .6        | .1   | .0        | .0   | .0              | .0   | 1.2             | .8             | .2                      | 1.2         | .2                  | .2         | .1              | 96.2       |  |
| NE                 | .4   | .4        | .1   | .0        | .0   | .0              | .0   | .8              | .3             | .5                      | 1.0         | .1                  | .7         | .3              | 96.2       |  |
| E                  | .5   | .6        | .0   | .0        | .0   | .0              | .0   | 1.1             | 1.1            | 1.5                     | 1.4         | .0                  | 1.1        | .6              | 93.4       |  |
| SE                 | 7.5  | 1.0       | .6   | .0        | .0   | .0              | .6   | 9.7             | 3.4            | 8.5                     | 1.2         | .0                  | 2.9        | 1.3             | 76.4       |  |
| S                  | 2.5  | 1.5       | .9   | .0        | .0   | .0              | .0   | 4.9             | 1.7            | 2.9                     | 3.0         | .3                  | .3         | .3              | 86.9       |  |
| SW                 | 1.1  | 2.6       | .1   | .0        | .0   | .0              | .0   | 3.4             | 1.2            | 1.8                     | 3.9         | .2                  | .2         | .0              | 88.8       |  |
| W                  | 1.8  | 3.0       | .4   | .0        | .0   | .0              | .0   | 4.8             | 3.8            | .7                      | 2.8         | .0                  | .6         | .0              | 87.2       |  |
| NW                 | .6   | 1.4       | .3   | .0        | .0   | .0              | .0   | 2.0             | 1.5            | .0                      | 1.0         | .0                  | .1         | .0              | 95.4       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .6   | .3        | .0   | .0        | .0   | .0              | .0   | .8              | .6             | 1.1                     | 5.1         | .0                  | 2.0        | .3              | 90.1       |  |
| TOT PCT            | .8   |           |      |           |      |                 | *    | 1.8             | .9             | 1.0                     | 1.7         | .1                  | .7         | .3              | 93.7       |  |
| TOT OBS:           | 6187 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                       |              |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|-----------------------|--------------|---------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO SIG<br>WEA |
| 00003         | .8                 | .7           | .1   | .0           | .0   | .0                    | .0   | 1.6                     | .8                | 2.1          | 1.0            | .1                        | .9            | .2                    |              | 93.5          |
| 06009         | .9                 | 1.2          | .2   | .0           | .0   | .0                    | .0   | 2.2                     | 1.1               | 1.4          | 2.2            | .1                        | .7            | .2                    |              | 92.2          |
| 12015         | .7                 | .8           | .1   | .0           | .0   | .0                    | .1   | 1.6                     | 1.0               | .2           | 2.1            | .2                        | 1.1           | .2                    |              | 93.6          |
| 18021         | 1.0                | .7           | .2   | .0           | .0   | .0                    | .0   | 1.8                     | .7                | .3           | 1.9            | .0                        | .5            | .4                    |              | 94.4          |
| TOT PCT       | .8                 |              |      |              |      |                       | *    | 1.8                     | .9                | 1.0          | 1.8            | .1                        | .8            | .3                    |              | 93.4          |
| TOT OBS:      | 6475               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                       |              |               |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       |      | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |    |  |  |  |
|----------|--------------------|------|-------|-------|-------|----|-------|------|-------|--------------|-------------|-------------|------------|-------|-------|-------|----|--|--|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    | 06   |       |              |             |             | 09         | 12    | 15    | 18    | 21 |  |  |  |
| N        | 1.6                | 7.7  | 4.7   | .6    | *     | .0 | 14.6  | 9.6  | 16.3  | 19.6         | 14.9        | 10.9        | 13.0       | 12.1  | 16.7  | 12.9  |    |  |  |  |
| NE       | 1.7                | 17.1 | 24.5  | 3.9   | .1    | .0 | 47.2  | 12.7 | 46.8  | 43.5         | 43.7        | 50.2        | 46.9       | 43.1  | 46.6  | 50.8  |    |  |  |  |
| E        | .7                 | 5.6  | 5.6   | .9    | *     | .0 | 12.8  | 11.7 | 11.4  | 7.7          | 13.0        | 16.3        | 14.3       | 15.4  | 10.5  | 13.6  |    |  |  |  |
| SE       | .5                 | 1.8  | .8    | .1    | .0    | .0 | 3.2   | 8.5  | 2.2   | 2.2          | 3.5         | 4.1         | 4.2        | 2.0   | 2.7   | 2.3   |    |  |  |  |
| S        | .5                 | 2.0  | 1.0   | .1    | .0    | .0 | 3.6   | 9.1  | 3.4   | 3.2          | 3.5         | 2.8         | 3.8        | 6.0   | 4.0   | 3.6   |    |  |  |  |
| SW       | .5                 | 3.0  | 1.6   | .1    | *     | .0 | 5.3   | 9.3  | 5.5   | 6.9          | 5.4         | 3.9         | 5.5        | 6.9   | 5.5   | 4.6   |    |  |  |  |
| W        | .6                 | 2.4  | 1.1   | .1    | *     | .0 | 4.2   | 8.6  | 3.9   | 6.5          | 4.6         | 4.3         | 3.9        | 4.4   | 4.4   | 3.8   |    |  |  |  |
| NW       | .7                 | 2.8  | 1.0   | .1    | .0    | .0 | 4.6   | 8.2  | 4.5   | 4.4          | 4.3         | 4.3         | 4.1        | 5.9   | 5.4   | 5.2   |    |  |  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 | .0    | .0   | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    |    |  |  |  |
| CALM     | 4.6                |      |       |       |       |    | 4.6   | .0   | 6.3   | 6.0          | 5.1         | 3.3         | 4.2        | 4.3   | 4.2   | 3.1   |    |  |  |  |
| TOT OBS  | 1403               | 5238 | 4966  | 736   | 13    | 0  | 12356 | 10.7 | 2365  | 149          | 2356        | 1164        | 2605       | 141   | 2429  | 1147  |    |  |  |  |
| TOT PCT  | 11.4               | 42.4 | 40.2  | 6.0   | .1    | .0 | 100.0 |      | 100.0 | 100.0        | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 |    |  |  |  |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|-------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |       |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 5.2  | 7.4                | 1.8   | .1    | .0       |       | 14.6         | 9.6         | 16.5        | 13.6       | 13.0     | 15.5     |  |
| NE       | 7.5  | 26.2               | 12.9  | .6    | .0       |       | 47.2         | 12.7        | 46.6        | 47.2       | 46.7     | 47.9     |  |
| E        | 2.8  | 7.1                | 2.8   | .2    | .0       |       | 12.8         | 11.7        | 11.2        | 14.1       | 14.3     | 11.5     |  |
| SE       | 1.4  | 1.4                | .3    | *     | .0       |       | 3.2          | 8.5         | 2.2         | 3.7        | 4.1      | 2.6      |  |
| S        | 1.5  | 1.7                | .4    | *     | .0       |       | 3.6          | 9.1         | 3.3         | 3.3        | 3.9      | 3.9      |  |
| SW       | 2.0  | 2.8                | .5    | *     | .0       |       | 5.3          | 9.3         | 5.6         | 4.9        | 5.5      | 5.2      |  |
| W        | 1.9  | 1.9                | .4    | *     | .0       |       | 4.2          | 8.6         | 4.0         | 4.5        | 4.0      | 4.2      |  |
| NW       | 2.2  | 2.0                | .4    | *     | .0       |       | 4.6          | 8.2         | 4.5         | 4.3        | 4.2      | 5.4      |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |       | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 4.6  |                    |       |       |          |       | 4.6          | .0          | 6.2         | 4.5        | 4.2      | 3.8      |  |
| TOT OBS  | 3587 | 6252               | 2394  | 123   | 0        | 12356 |              | 10.7        | 2514        | 3520       | 2746     | 3576     |  |
| TOT PCT  | 29.0 | 50.6               | 19.4  | 1.0   | .0       | 100.0 |              |             | 100.0       | 100.0      | 100.0    | 100.0    |  |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003 | 6.2  | 7.2 | 41.5 | 39.4  | 5.6   | .1    | .0  | 10.5 | 100.0    | 2514      |
| 06009 | 4.5  | 6.4 | 42.5 | 40.1  | 6.4   | .1    | .0  | 10.8 | 100.0    | 3520      |
| 12015 | 4.2  | 6.8 | 41.3 | 41.6  | 6.0   | .0    | .0  | 10.9 | 100.0    | 2746      |
| 18021 | 3.8  | 6.8 | 43.8 | 39.7  | 5.7   | .2    | .0  | 10.7 | 100.0    | 3376      |
| TOT   | 568  | 835 | 3238 | 4966  | 736   | 13    | 0   | 10.7 |          | 12356     |
| PCT   | 4.6  | 6.8 | 42.4 | 40.2  | 6.0   | .1    | .0  | 10.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 10.0 | 4.0  | 3.1  | .8        | 2.5       |                  |
| NE       | 22.2 | 9.1  | 9.1  | 2.9       | 2.9       |                  |
| E        | 5.1  | 1.7  | 2.1  | .7        | 2.9       |                  |
| SE       | 1.0  | .4   | .9   | .5        | 4.1       |                  |
| S        | 1.4  | 1.0  | 1.5  | .5        | 4.0       |                  |
| SW       | 2.4  | 1.7  | 2.3  | .5        | 3.8       |                  |
| W        | 2.0  | .8   | 1.3  | .2        | 3.2       |                  |
| NW       | 2.4  | 1.3  | 1.1  | .2        | 2.9       |                  |
| VAR      | .0   | .0   | .0   | .0        | .0        |                  |
| CALM     | 3.9  | 1.0  | .8   | .5        | 2.3       |                  |
| TOT OBS  | 2516 | 1036 | 1103 | 343       | 4998      | 2.9              |
| TOT PCT  | 50.3 | 20.7 | 22.1 | 6.9       | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

|         | 000 149 | 150 299 | 300 599 | 600 999 | 1000 1999 | 2000 3499 | 3500 4999 | 5000 6499 | 6500 7999 | 8000+ ANY HGT | NM <5/8 TOTAL OBS |
|---------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|---------------|-------------------|
| N       | .1      | *       | .0      | .3      | .9        | .7        | .2        | .1        | *         | .2            | 15.4              |
| NE      | *       | *       | .0      | .6      | 2.0       | 2.2       | .8        | .4        | .1        | .7            | 36.4              |
| E       | *       | *       | .0      | .2      | .5        | .5        | .2        | .1        | *         | .1            | 7.9               |
| SE      | *       | .0      | *       | .2      | .3        | .2        | .1        | .0        | *         | .2            | 1.8               |
| S       | *       | .0      | *       | .3      | .5        | .2        | .1        | *         | .1        | *             | 3.1               |
| SW      | *       | .0      | .1      | .3      | .5        | .5        | .2        | *         | *         | *             | 5.2               |
| W       | .1      | .0      | .0      | .1      | .3        | .2        | .1        | *         | .0        | *             | 3.4               |
| NW      | *       | .0      | *       | .2      | .3        | .1        | .1        | *         | .0        | *             | 4.2               |
| VAR     | .0      | .0      | .0      | .0      | .0        | .0        | .0        | .0        | .0        | .0            | .0                |
| CALM    | .1      | .0      | *       | .1      | .1        | .2        | .1        | .0        | *         | .1            | 5.3               |
| TOT OBS | 19      | 2       | 11      | 111     | 270       | 246       | 98        | 35        | 13        | 65            | 4998              |
| TOT PCT | .4      | *       | .2      | 2.2     | 5.4       | 4.9       | 2.0       | .7        | .3        | 1.3           | 100.0             |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM)<br>= OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|----------------------|-----------|-----------|------------|---------|
| = OR >6500     | 1.4      | 1.6     | 1.6     | 1.6                  | 1.6       | 1.6       | 1.6        | 1.6     |
| = OR >5000     | 2.0      | 2.3     | 2.3     | 2.3                  | 2.3       | 2.3       | 2.3        | 2.3     |
| = OR >3500     | 3.8      | 4.3     | 4.3     | 4.3                  | 4.3       | 4.3       | 4.3        | 4.3     |
| = OR >2000     | 7.7      | 9.0     | 9.1     | 9.1                  | 9.1       | 9.1       | 9.1        | 9.1     |
| = OR >1000     | 12.2     | 14.2    | 14.5    | 14.5                 | 14.6      | 14.6      | 14.6       | 14.6    |
| = OR >600      | 13.8     | 16.4    | 16.7    | 16.7                 | 16.7      | 16.7      | 16.7       | 16.7    |
| = OR >300      | 13.8     | 16.6    | 16.9    | 16.9                 | 16.9      | 16.9      | 16.9       | 16.9    |
| = OR >150      | 13.9     | 16.6    | 16.9    | 16.9                 | 17.0      | 17.0      | 17.0       | 17.0    |
| = OR >0        | 13.9     | 16.7    | 17.0    | 17.1                 | 17.1      | 17.2      | 17.3       | 17.3    |
| TOTAL          | 723      | 865     | 885     | 888                  | 849       | 893       | 896        | 899     |

TOTAL NUMBER OF OBS: 5193

PCT FREQ NH <5/8: 82.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL OBS |
|------|------|------|------|-----|-----|-----|-----|---------|-----------|
| 32.5 | 16.9 | 14.3 | 11.3 | 7.3 | 4.8 | 4.3 | 4.0 | 4.3     | 5461      |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1894-1973

NOVEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | *    | .0  | .0  | .1  | .1  | *   | *   | .0  | .2   | .5    |              |
|              | TOT %  | .1   | *    | .0  | .0  | .1  | .1  | *   | *   | .0  | .2   | .5    |              |
| 1/2<1        | PCP    | *    | .0   | .0  | .0  | .0  | .0  | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | *    | .1   | .1  | .0  | .0  | *   | *   | *   | .0  | *    | .3    |              |
|              | TOT %  | *    | .1   | .1  | .0  | .0  | *   | *   | *   | .0  | *    | .3    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0  | .0  | *   | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | *    | .1    |              |
|              | TOT %  | *    | *    | *   | .0  | .0  | *   | .0  | .0  | .0  | *    | .1    |              |
| 2<5          | PCP    | *    | *    | .0  | .1  | .0  | .0  | *   | *   | .0  | .0   | .2    |              |
|              | NO PCP | .2   | .6   | .1  | *   | .1  | .1  | *   | *   | .0  | .1   | 1.2   |              |
|              | TOT %  | .2   | .6   | .1  | .1  | .1  | .1  | .1  | .1  | .0  | .1   | 1.4   |              |
| 5<10         | PCP    | .1   | .2   | .1  | .1  | .1  | .2  | .1  | .1  | .0  | *    | 1.0   |              |
|              | NO PCP | 2.7  | 6.5  | 1.8 | .4  | .7  | 1.1 | .8  | .8  | .0  | .9   | 15.7  |              |
|              | TOT %  | 2.8  | 6.7  | 1.9 | .6  | .9  | 1.2 | 1.0 | .8  | .0  | .9   | 16.7  |              |
| 10+          | PCP    | .1   | .2   | *   | .1  | .1  | .1  | *   | *   | .0  | *    | .6    |              |
|              | NO PCP | 14.2 | 35.6 | 7.6 | 2.0 | 3.6 | 5.4 | 3.3 | 4.1 | .0  | 4.6  | 80.4  |              |
|              | TOT %  | 14.3 | 35.8 | 7.7 | 2.1 | 3.7 | 5.4 | 3.4 | 4.1 | .0  | 4.6  | 81.0  |              |
| TOT OBS      |        | 6173 |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        | 17.4 | 43.3 | 9.7 | 2.8 | 4.7 | 6.9 | 4.5 | 5.0 | .0  | 5.7  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | .0   | .0  | *   | *   | .0  | .0  | .0  | .1   | .2    |              |
|              | 4-10       | *    | .0   | .0   | .0  | *   | .1  | *   | *   | .0  |      | .2    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | *   | *   | .0  | .0  |      | *     |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  |      | .0    |              |
|              | TOT %      | .1   | *    | .0   | .0  | *   | .1  | *   | *   | .0  | .1   | .4    |              |
| 1/2<1        | 0-3        | *    | *    | *    | .0  | .0  | *   | *   | .0  | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | *    | .0  | .0  | *   | *   | *   | .0  |      | .1    |              |
|              | 11-21      | *    | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  |      | .1    |              |
|              | 22+        | .0   | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  |      | *     |              |
|              | TOT %      | *    | .1   | *    | .0  | .0  | *   | *   | *   | .0  | *    | .2    |              |
| 1<2          | 0-3        | *    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | .0   | *    | *    | *   | *   | .0  | *   | .0  | .0  |      | *     |              |
|              | 11-21      | *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  |      | *     |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | *   | .0  | .0  | .0  |      | *     |              |
|              | TOT %      | *    | *    | *    | *   | *   | *   | *   | .0  | .0  | *    | .1    |              |
| 2<5          | 0-3        | *    | .1   | *    | *   | .0  | *   | .0  | .0  | .0  | *    | .2    |              |
|              | 4-10       | .1   | .2   | *    | *   | *   | *   | *   | *   | .0  |      | .4    |              |
|              | 11-21      | .1   | .3   | *    | *   | *   | *   | *   | *   | .0  |      | .5    |              |
|              | 22+        | *    | .1   | *    | *   | .0  | .0  | .0  | .0  | .0  |      | .1    |              |
|              | TOT %      | .2   | .6   | .1   | .1  | *   | .1  | .1  | .1  | .0  | *    | 1.2   |              |
| 5<10         | 0-3        | .2   | .3   | .1   | .1  | .1  | .1  | .1  | .1  | .0  | .8   | 1.9   |              |
|              | 4-10       | 1.4  | 2.1  | .8   | .3  | .4  | .6  | .4  | .4  | .0  |      | 6.3   |              |
|              | 11-21      | .7   | 3.4  | .7   | .1  | .2  | .3  | .3  | .2  | .0  |      | 5.8   |              |
|              | 22+        | .1   | .7   | .1   | *   | *   | *   | *   | *   | .0  |      | 1.0   |              |
|              | TOT %      | 2.4  | 6.4  | 1.7  | .6  | .7  | 1.0 | .8  | .7  | .0  | .8   | 15.0  |              |
| 10+          | 0-3        | 1.4  | 1.5  | .5   | .3  | .3  | .4  | .5  | .6  | .0  | 4.1  | 9.6   |              |
|              | 4-10       | 7.3  | 15.1 | 4.3  | 1.2 | 1.7 | 2.5 | 1.8 | 2.5 | .0  |      | 36.4  |              |
|              | 11-21      | 4.5  | 20.2 | 3.9  | .6  | .9  | 1.3 | .6  | .8  | .0  |      | 32.8  |              |
|              | 22+        | .6   | 2.9  | .4   | .1  | *   | .1  | *   | *   | .0  |      | 4.2   |              |
|              | TOT %      | 13.8 | 39.7 | 9.0  | 2.2 | 3.0 | 4.3 | 3.0 | 3.9 | .0  | 4.1  | 83.0  |              |
| TOT OBS      |            | 8762 |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            | 16.5 | 46.8 | 10.9 | 2.8 | 3.7 | 5.5 | 3.9 | 4.7 | .0  | 5.1  | 100.0 |              |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

# NOVEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+     | TOTAL       | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|-------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-----------|-------------|---------------------|---------------|
| 00003       | .5         | .1         | .1         | 1.5        | 4.6          | 4.1          | 1.3          | .5           | .2           | 1.0       | 14.0        | 86.0                | 1297          |
| 06009       | .4         | .0         | .1         | 1.8        | 5.2          | 4.9          | 1.7          | .9           | .3           | 1.7       | 17.1        | 82.9                | 1274          |
| 12015       | .3         | .1         | .4         | 2.3        | 5.7          | 5.9          | 1.9          | .7           | .2           | .8        | 18.3        | 81.7                | 1466          |
| 18021       | .1         | .0         | .3         | 2.6        | 5.3          | 3.7          | 2.7          | .6           | .3           | 1.5       | 17.3        | 82.7                | 1361          |
| TOT<br>PCT  | 19<br>.4   | 2<br>.0    | 12<br>.2   | 112<br>2.1 | 282<br>5.2   | 254<br>4.7   | 104<br>1.9   | 97<br>.7     | 14<br>.3     | 67<br>1.2 | 903<br>16.7 | 4495<br>83.3        | 5398<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HR<br>(GMT) | <1/2     | 1/2<1    | 1<2      | 2<5        | 5<10         | 10+          | TOTAL<br>OBS  |
|-------------|----------|----------|----------|------------|--------------|--------------|---------------|
| 00003       | .2       | .3       | .1       | 1.7        | 14.8         | 82.8         | 2005          |
| 06009       | .8       | .3       | .1       | .7         | 17.2         | 80.9         | 2407          |
| 12015       | .6       | .2       | .2       | 1.6        | 12.5         | 84.9         | 2182          |
| 18021       | .2       | .2       | .1       | 1.1        | 15.9         | 82.4         | 2458          |
| TOT<br>PCT  | 43<br>.5 | 24<br>.3 | 13<br>.1 | 113<br>1.2 | 1373<br>15.2 | 7486<br>82.7 | 9052<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS  |
|-------------|---------------|------------|-------------|-----------------|--------------------|---------------|
| 00003       | .6            | .8         | 3.7         | 12.0            | 84.3               | 1241          |
| 06009       | .4            | 1.0        | 3.9         | 15.0            | 81.1               | 1223          |
| 12015       | .2            | .8         | 4.6         | 15.3            | 80.1               | 1414          |
| 18021       | .2            | .5         | 4.3         | 14.5            | 81.2               | 1315          |
| TOT<br>PCT  | 17<br>.3      | 40<br>.8   | 215<br>4.1  | 740<br>14.2     | 4238<br>81.6       | 5193<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | .0    | .1    | .0    | .0     | 0            | .1          |
| 75/79  | .0   | .0    | .0    | .3    | 1.0   | 1.6   | 1.1   | .2     | 201          | 4.2         |
| 70/74  | .0   | .0    | .1    | 1.2   | 8.5   | 19.2  | 18.3  | 9.0    | 2694         | 56.3        |
| 65/69  | .0   | .0    | .0    | .9    | 4.4   | 10.8  | 15.5  | 7.2    | 1861         | 38.9        |
| 60/64  | .0   | .0    | .0    | .0    | .1    | .0    | .1    | .2     | 25           | .5          |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 0            | .0          |
| TOTAL  | 0    | 0     | 9     | 115   | 675   | 1515  | 1680  | 794    | 4788         | 100.0       |
| PCT    | .0   | .0    | .2    | 2.4   | 14.1  | 31.6  | 35.1  | 16.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|------|-----|-----|-----|-----|-----|-----|------|
| .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| .7   | 1.6  | .5   | .1  | .1  | .3  | .3  | .3  | .0  | .3   |
| 8.5  | 24.4 | 6.4  | 1.7 | 2.5 | 4.7 | 2.8 | 3.2 | .0  | 2.0  |
| 7.5  | 18.6 | 3.5  | 1.1 | 1.8 | 1.6 | 1.1 | 1.6 | .0  | 2.1  |
| .0   | .3   | .0   | .0  | .0  | .1  | .0  | .0  | .0  | .0   |
| .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 16.9 | 44.9 | 10.4 | 3.0 | 4.4 | 6.7 | 4.2 | 5.0 | .0  | 4.6  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003       | 82  | 75  | 73  | 69  | 65 | 63 | 50  | 69.3 | 2585         |
| 06009       | 82  | 75  | 73  | 69  | 65 | 62 | 50  | 69.2 | 3581         |
| 12015       | 84  | 80  | 77  | 72  | 67 | 64 | 54  | 71.6 | 2727         |
| 18021       | 83  | 79  | 76  | 71  | 66 | 64 | 50  | 70.8 | 3586         |
| TOT         | 84  | 78  | 75  | 70  | 66 | 63 | 50  | 70.2 | 12479        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.7   | 8.8   | 27.8  | 40.5  | 21.2   | 81   | 1210         |
| 06009         | .0   | 1.7   | 11.9  | 26.0  | 37.3  | 23.1   | 81   | 1245         |
| 12015         | .0   | 4.3   | 19.6  | 34.5  | 30.4  | 11.3   | 77   | 1283         |
| 18021         | .0   | 2.4   | 15.1  | 36.3  | 33.1  | 13.2   | 78   | 1282         |
| TOT           | 0    | 128   | 699   | 1567  | 1769  | 857    | 79   | 3020         |

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PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | M<br>FOG | WU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | *        | 3     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | *        | .1       | .1       | 14    | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | *        | .2       | .2       | .1       | 29    | *        | .5        |
| 7/8                | .0       | .0       | .0       | .0       | *        | .1       | .5       | .2       | .1       | 49    | .0       | .8        |
| 6                  | .0       | .0       | .0       | .0       | .0       | .2       | .5       | .1       | .0       | 45    | *        | .7        |
| 5                  | .0       | .0       | .0       | .0       | .1       | .6       | 1.0      | .2       | .0       | 111   | *        | 1.9       |
| 4                  | .0       | .0       | .0       | .0       | .2       | 1.2      | 1.4      | .1       | *        | 173   | .1       | 2.9       |
| 3                  | .0       | .0       | .0       | .0       | .5       | 2.4      | 1.8      | .2       | .1       | 288   | .1       | 4.8       |
| 2                  | .0       | .0       | .0       | .1       | .8       | 4.8      | 2.8      | .1       | .0       | 498   | .2       | 8.4       |
| 1                  | .0       | .0       | .0       | .1       | 2.1      | 8.2      | 3.0      | .1       | .0       | 787   | .2       | 13.2      |
| 0                  | .0       | .0       | .0       | .2       | 4.4      | 10.7     | 2.7      | *        | *        | 1053  | .5       | 17.5      |
| -1                 | .0       | .0       | .0       | .1       | 4.4      | 11.6     | 1.4      | .0       | .0       | 1020  | .3       | 17.2      |
| -2                 | .0       | .0       | .0       | .1       | 3.7      | 7.9      | 1.0      | *        | *        | 743   | .2       | 12.6      |
| -3                 | .0       | .0       | .0       | *        | 2.7      | 4.6      | .2       | .0       | .0       | 441   | .1       | 7.5       |
| -4                 | .0       | .0       | .0       | .2       | 2.1      | 1.6      | .1       | .0       | .0       | 234   | .2       | 3.8       |
| -5                 | .0       | .0       | *        | .3       | 1.1      | .9       | *        | .0       | .0       | 139   | *        | 2.3       |
| -6                 | .0       | .0       | .0       | .1       | .4       | .4       | *        | .0       | .0       | 54    | .0       | .9        |
| -7/-8              | .0       | .0       | *        | .3       | .6       | .2       | *        | .0       | .0       | 65    | .0       | 1.1       |
| -9/-10             | .0       | .0       | .1       | .1       | .2       | .1       | *        | .0       | .0       | 28    | .0       | .5        |
| -11/-13            | .0       | *        | .1       | .1       | .1       | *        | .0       | .0       | .0       | 24    | *        | .4        |
| -14/-16            | .0       | .1       | .2       | .0       | .0       | .0       | .0       | .0       | .0       | 16    | *        | .3        |
| -17/-19            | *        | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 8     | *        | .1        |
| -20/-22            | .3       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 18    | *        | .3        |
| -23/-25            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 19       | 16       | 25       | 93       | 1374     | 3247     | 966      | 80       | 21       | 5841  | 111      | 5730      |
| PCT                | .3       | .3       | .4       | 1.6      | 23.5     | 55.6     | 16.5     | 1.4      | .4       | 100.0 | 1.9      | 98.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .8  | 1.8  | .1    | .0    | .0    | .0  | 2.8  | .6  | 2.0  | .1    | .0    | .0    | .0  | 2.8  |
| 1-2     | .4  | 4.7  | .9    | .0    | .0    | .0  | 6.0  | .3  | 7.4  | 2.9   | .0    | .0    | .0  | 10.6 |
| 3-4     | *   | 1.8  | 2.6   | .1    | .0    | .0  | 4.5  | .1  | 4.0  | 8.4   | .5    | .0    | .0  | 13.0 |
| 5-6     | .0  | .5   | 2.1   | .2    | .0    | .0  | 2.8  | .0  | 1.3  | 7.9   | 1.1   | .0    | .0  | 10.4 |
| 7       | .0  | .1   | .7    | .4    | .0    | .0  | 1.2  | .0  | .1   | 2.1   | .9    | .0    | .0  | 3.1  |
| 8-9     | .0  | .1   | .3    | .1    | .0    | .0  | .5   | .0  | *    | .9    | .9    | *     | .0  | 1.9  |
| 10-11   | .0  | *    | .1    | *     | .0    | .0  | .1   | .0  | *    | .2    | .4    | .1    | .0  | .6   |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | *     | .2    | *     | .0  | .2   |
| 13-16   | .0  | .0   | .1    | *     | .0    | .0  | .1   | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.3 | 9.0  | 7.0   | .9    | .0    | .0  | 18.2 | 1.0 | 14.9 | 22.6  | 4.0   | .1    | .0  | 42.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .8   | .1    | .0    | .0    | .0  | 1.1 | .2  | .3   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .1  | 1.9  | .7    | .0    | .0    | .0  | 2.8 | .2  | .6   | .2    | .0    | .0    | .0  | 1.0 |
| 3-4     | .0  | 1.4  | 1.5   | *     | .0    | .0  | 3.0 | .0  | .3   | .2    | .0    | .0    | .0  | .5  |
| 5-6     | .0  | .4   | 1.2   | .1    | .0    | .0  | 1.7 | .0  | *    | .1    | .1    | .0    | .0  | .2  |
| 7       | .0  | .0   | .2    | .1    | .0    | .0  | .2  | .0  | .0   | .2    | *     | .0    | .0  | .2  |
| 8-9     | .0  | *    | .1    | .1    | .0    | .0  | .3  | .0  | .0   | *     | *     | .0    | .0  | .1  |
| 10-11   | .0  | *    | *     | .1    | .0    | .0  | .2  | .0  | *    | *     | *     | .0    | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 4.6  | 3.9   | .5    | .0    | .0  | 9.3 | .4  | 1.2  | .7    | .1    | .0    | .0  | 2.4 |



PERIOD: (OVER-ALL) 1963-1973

NOVEMBER

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .4   | .0    | .0    | .0    | .0  | .5  | .5  | .6   | *     | .0    | .0    | .0  | 1.1 |           |
| 1-2     | .2  | 1.2  | .5    | .0    | .0    | .0  | 1.8 | .1  | 2.2  | .5    | .0    | .0    | .0  | 2.7 |           |
| 3-4     | .0  | .5   | .6    | *     | .0    | .0  | 1.1 | *   | .7   | .9    | .0    | .0    | .0  | 1.7 |           |
| 5-6     | .0  | .2   | .3    | .0    | .0    | .0  | .5  | .0  | .1   | .4    | .0    | .0    | .0  | .5  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .1    | *     | .0    | .0  | .2  |           |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | .0   | .1    | *     | .0    | .0  | .2  |           |
| 10-11   | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | 2.3  | 1.6   | .1    | .0    | .0  | 4.3 | .6  | 3.7  | 2.0   | .1    | *     | .0  | 6.4 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .5  | .8   | .0    | .0    | .0    | .0  | 1.4 | .4  | .7   | *     | .0    | .0    | .0  | 1.1 |           |
| 1-2     | .2  | .9   | .1    | .0    | .0    | .0  | 1.2 | .1  | 2.0  | .1    | .0    | .0    | .0  | 2.2 |           |
| 3-4     | .0  | .5   | .5    | .1    | .0    | .0  | 1.0 | .0  | .4   | .5    | *     | .0    | .0  | 1.0 |           |
| 5-6     | .0  | *    | .4    | *     | .0    | .0  | .4  | .0  | *    | .3    | *     | .0    | .0  | .4  |           |
| 7       | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | *    | .3    | *     | .0    | .0  | .3  |           |
| 8-9     | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | *     | .0    | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .7  | 2.3  | 1.0   | .1    | *     | .0  | 4.2 | .5  | 3.2  | 1.3   | .1    | .0    | .0  | 5.0 | 92.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 12.4 | 7.6  | .3    | .0    | .0    | .0  | 20.3  |         |
| 1-2     | 2.1  | 20.5 | 5.8   | .0    | .0    | .0  | 28.3  |         |
| 3-4     | .1   | 9.4  | 14.9  | .7    | .0    | .0  | 25.1  |         |
| 5-6     | .0   | 2.6  | 12.2  | 1.5   | .0    | .0  | 16.4  |         |
| 7       | .0   | .2   | 3.7   | 1.4   | .0    | .0  | 5.3   |         |
| 8-9     | *    | .2   | 1.5   | 1.3   | .1    | .0  | 3.0   |         |
| 10-11   | .0   | .1   | .4    | .6    | .1    | .0  | 1.1   |         |
| 12      | .0   | .0   | .1    | .2    | *     | .0  | .3    |         |
| 13-16   | .0   | .0   | .1    | .1    | *     | .0  | .3    |         |
| 17-19   | .0   | .0   | .0    | *     | .0    | .0  | *     |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 14.6 | 40.5 | 39.0  | 5.8   | .2    | .0  | 100.0 | 3585    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.7 | 10.9 | 11.2 | 6.8  | 2.5  | .8  | .3    | *   | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1484  | 3        |
| 6-7          | *   | 2.0  | 5.8  | 7.2  | 4.2  | 1.7 | 1.2   | .4  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 963   | 5        |
| 8-9          | *   | .5   | 1.5  | 2.9  | 2.4  | 1.1 | 1.2   | .5  | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 442   | 6        |
| 10-11        | .0  | .3   | .6   | .8   | 1.1  | .9  | .4    | *   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 190   | 6        |
| 12-13        | .0  | .0   | 1.1  | .5   | .2   | .4  | .1    | .1  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 115   | 6        |
| >13          | .0  | .0   | .0   | .3   | .1   | .1  | .1    | .0  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 26    | 7        |
| INDET        | 5.9 | 4.3  | 5.7  | 3.5  | 2.1  | 1.1 | .5    | .1  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 987   | 3        |
| TOTAL        | 365 | 771  | 1086 | 925  | 332  | 294 | 159   | 47  | 56    | 11    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4207  | 4        |
| PCT          | 8.7 | 18.3 | 25.8 | 22.0 | 12.6 | 6.0 | 3.8   | 1.1 | 1.3   | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

# DECEMBER

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |  |
| N                  | .5   | .9        | .1   | .0        | .0   | .0              | .0   | 1.4             | 1.1            | .6                      | .7          | .0                  | .2         |                 | 95.9       |  |
| NE                 | .1   | .7        | .2   | .0        | .0   | .0              | .0   | 1.0             | .8             | .3                      | .6          | *                   | .6         | .4              | 96.4       |  |
| E                  | .5   | .5        | .2   | .0        | .0   | .0              | .0   | 1.2             | .3             | .7                      | .8          | .0                  | .7         | .6              | 95.7       |  |
| SE                 | 1.1  | .0        | .7   | .0        | .0   | .0              | .0   | 1.8             | .0             | .4                      | 1.1         | .0                  | 1.1        | .2              | 95.6       |  |
| S                  | 1.0  | .5        | .0   | .0        | .0   | .0              | .0   | 1.5             | .0             | .0                      | .8          | .0                  | 1.5        | .0              | 96.2       |  |
| SW                 | .8   | 3.7       | 1.6  | .0        | .0   | .0              | .0   | 6.1             | 1.0            | 2.5                     | 1.0         | .0                  | .0         | .0              | 90.2       |  |
| W                  | .7   | 2.8       | .0   | .0        | .0   | .0              | .0   | 3.4             | 4.7            | 2.0                     | .0          | .0                  | .0         | .0              | 90.6       |  |
| NW                 | .6   | 4.2       | .5   | .0        | .0   | .0              | .0   | 5.3             | 2.7            | .0                      | .0          | .0                  | .0         | .0              | 92.1       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .6   | .0        | .0   | .0        | .0   | .0              | .0   | .6              | .6             | .0                      | 1.8         | .0                  | .6         | .0              | 96.3       |  |
| TOT PCT            | .3   | .9        | .2   | .0        | .0   | .0              | .0   | 1.4             | .9             | .4                      | .6          | *                   | .6         | .3              | 95.8       |  |
| TOT OBS:           | 6625 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                       |              |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|-----------------------|--------------|---------------|
|               | RAIN               | RAIN<br>SHMR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO SIG<br>WEA |
| 00003         | .3                 | .4           | .2   | .0           | .0   | .0                    | .0   | 1.0                     | .9                | .9           | .5             | .0                        | .5            | .1                    |              | 96.3          |
| 06009         | .4                 | 1.1          | .2   | .0           | .0   | .0                    | .0   | 1.8                     | 1.2               | .7           | 1.1            | .0                        | .4            | .1                    |              | 94.8          |
| 12015         | .1                 | 1.0          | .2   | .0           | .0   | .0                    | .0   | 1.3                     | 1.0               | .0           | .4             | .1                        | .5            | .4                    |              | 96.3          |
| 18021         | .4                 | .9           | .1   | .0           | .0   | .0                    | .0   | 1.4                     | .3                | .2           | .7             | .0                        | .9            | .6                    |              | 96.0          |
| TOT PCT       | .3                 | .9           | .2   | .0           | .0   | .0                    | .0   | 1.4                     | .8                | .4           | .7             | *                         | .6            | .3                    |              | 95.8          |
| TOT OBS:      | 6826               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                       |              |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 5.5  | 4.3   | .5    | *     | .0  |       | 11.5      | 10.3     |          | 13.0       | 12.6  | 12.5  | 8.1   | 9.5   | 7.2   | 12.8  | 11.4  |
| NE       | 1.4                | 17.8 | 29.5  | 6.1   | .3    | .0  |       | 55.0      | 13.7     |          | 58.0       | 64.2  | 55.0  | 50.3  | 53.4  | 61.8  | 56.1  | 52.5  |
| E        | 1.0                | 7.3  | 8.0   | 1.3   | *     | .0  |       | 17.5      | 11.8     |          | 13.1       | 11.4  | 16.2  | 24.1  | 21.2  | 20.6  | 16.2  | 18.1  |
| SE       | .4                 | 1.8  | .6    | .1    | .0    | .0  |       | 2.9       | 8.4      |          | 2.0        | 1.6   | 2.3   | 4.2   | 4.1   | 1.3   | 2.3   | 3.0   |
| S        | .4                 | 1.1  | .3    | *     | .0    | .0  |       | 1.9       | 7.2      |          | 1.6        | 2.0   | 1.7   | 2.2   | 1.9   | 1.8   | 2.0   | 2.2   |
| SW       | .4                 | 1.4  | .6    | .1    | *     | .0  |       | 2.5       | 8.7      |          | 2.5        | 2.0   | 2.7   | 3.0   | 2.4   | .7    | 1.9   | 3.9   |
| W        | .5                 | 1.2  | .7    | .2    | *     | .0  |       | 2.6       | 9.8      |          | 2.5        | 1.8   | 2.8   | 2.7   | 2.3   | 1.9   | 2.9   | 2.8   |
| NW       | .4                 | 1.9  | .9    | .1    | .0    | .0  |       | 3.3       | 9.1      |          | 3.1        | 1.8   | 3.4   | 3.4   | 3.1   | 3.4   | 3.5   | 3.3   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.8                |      |       |       |       |     |       | 2.8       | .0       |          | 4.0        | 2.6   | 3.3   | 2.1   | 2.1   | 1.2   | 2.3   | 2.8   |
| TOT OBS  | 1094               | 4889 | 5771  | 1066  | 43    | 0   | 12863 |           | 11.9     |          | 2492       | 153   | 2480  | 1165  | 2680  | 169   | 2544  | 1180  |
| TOT PCT  | 8.5                | 38.0 | 44.9  | 8.3   | .3    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 9A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 06    | 12    | 18    |
| N        | 3.7                | 5.9  | 1.9   | .1    | .0  |       |  | 11.5      | 10.3     |          | 13.0       | 11.1  | 9.4   | 12.3  |
| NE       | 6.6                | 30.1 | 16.9  | 1.4   | *   |       |  | 55.0      | 13.7     |          | 58.4       | 53.5  | 53.9  | 54.9  |
| E        | 3.4                | 10.3 | 3.6   | .2    | *   |       |  | 17.5      | 11.8     |          | 13.0       | 18.7  | 21.2  | 16.8  |
| SE       | 1.3                | 1.4  | .2    | *     | .0  |       |  | 2.9       | 8.4      |          | 2.0        | 2.9   | 3.9   | 2.6   |
| S        | 1.1                | .6   | .1    | *     | .0  |       |  | 1.9       | 7.2      |          | 1.6        | 1.9   | 1.9   | 2.0   |
| SW       | 1.1                | 1.1  | .2    | *     | .0  |       |  | 2.5       | 8.7      |          | 2.5        | 2.8   | 2.3   | 2.6   |
| W        | 1.1                | 1.0  | .4    | .1    | *   |       |  | 2.6       | 9.8      |          | 2.5        | 2.8   | 2.3   | 2.8   |
| NW       | 1.4                | 1.5  | .4    | *     | .0  |       |  | 3.3       | 9.1      |          | 3.0        | 3.4   | 3.1   | 3.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | 2.8                |      |       |       |     |       |  | 2.8       | .0       |          | 3.9        | 2.9   | 2.0   | 2.5   |
| TOT OBS  | 2888               | 6671 | 3051  | 250   | 3   | 12963 |  |           | 11.9     |          | 2645       | 3645  | 2849  | 3724  |
| TOT PCT  | 22.5               | 51.9 | 23.7  | 1.9   | *   |       |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4+ | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|----|-------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |    |       |          |           |
| 0000 | 3.9  | 5.7 | 35.9 | 45.4               | 8.8   | .3    | .0 | 12.0  | 100.0    | 2645      |
| 0600 | 2.9  | 5.4 | 39.6 | 43.6               | 8.3   | .3    | .0 | 11.8  | 100.0    | 3645      |
| 1200 | 2.0  | 5.3 | 35.8 | 47.3               | 7.2   | .4    | .0 | 12.4  | 100.0    | 2849      |
| 1800 | 2.5  | 6.4 | 39.7 | 43.9               | 7.3   | .3    | .0 | 11.7  | 100.0    | 3724      |
| TOT  | 359  | 735 | 4889 | 5771               | 1066  | 43    | 0  | 11.9  |          | 12863     |
| PCT  | 2.8  | 5.7 | 38.0 | 44.9               | 8.3   | .3    | .0 | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
|          |      |      |      |            |              |                        |
| N        | 7.6  | 2.4  | 3.0  | .8         |              | 2.7                    |
| NE       | 31.7 | 10.8 | 14.2 | 4.1        |              | 2.9                    |
| E        | 7.8  | 1.9  | 2.8  | 1.0        |              | 2.6                    |
| SE       | 1.1  | .2   | .4   | .1         |              | 2.6                    |
| S        | .6   | .2   | .3   | .2         |              | 3.4                    |
| SW       | .5   | .3   | .4   | .2         |              | 3.8                    |
| W        | .8   | .7   | .4   | .1         |              | 3.2                    |
| NW       | 1.3  | .8   | .8   | .2         |              | 3.4                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | 1.8  | .4   | .3   | .1         |              | 1.7                    |
| TOT OBS  | 2880 | 952  | 1217 | 359        | 5408         | 2.8                    |
| TOT PCT  | 53.3 | 17.6 | 22.5 | 6.6        | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .0  | .0  | .0  | .3  | .8   | .8   | .4   | .1   | .0   | .2    | 11.1    |       |
| NE      | .0  | .0  | .1  | 1.1 | 4.4  | 3.4  | 1.7  | .3   | .6   | .9    | 48.3    |       |
| E       | .0  | .0  | .0  | .3  | .7   | .7   | .3   | .1   | .1   | .2    | 11.2    |       |
| SE      | .0  | .0  | .0  | .0  | .1   | .1   | .1   | .0   | .0   | .0    | 1.5     |       |
| S       | .0  | .0  | .0  | .0  | .1   | .1   | .1   | .0   | .0   | .0    | 1.0     |       |
| SW      | .0  | .0  | .0  | .0  | .1   | .1   | .1   | .0   | .0   | .0    | .9      |       |
| W       | .0  | .0  | .0  | .0  | .1   | .1   | .1   | .0   | .0   | .0    | 1.6     |       |
| NW      | .0  | .0  | .0  | .1  | .2   | .2   | .1   | .0   | .0   | .0    | 2.4     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .0  | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .0    | 2.3     |       |
| TOT OBS | 5   | 0   | 7   | 109 | 349  | 304  | 146  | 31   | 42   | 73    | 4342    | 5408  |
| TOT PCT | .1  | .0  | .1  | 2.0 | 6.5  | 5.6  | 2.7  | .6   | .8   | 1.3   | 80.3    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.7       | 2.0  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1   | 2.1  |
| >5000             | 2.2       | 2.6  | 2.6  | 2.6  | 2.6  | 2.6  | 2.6   | 2.6  |
| >3500             | 4.6       | 5.2  | 5.3  | 5.3  | 5.3  | 5.3  | 5.3   | 5.3  |
| >2000             | 9.6       | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9  | 10.9 |
| >1000             | 15.4      | 17.1 | 17.3 | 17.3 | 17.3 | 17.3 | 17.3  | 17.3 |
| >600              | 17.1      | 19.0 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3  | 19.3 |
| >300              | 17.2      | 19.1 | 19.4 | 19.4 | 19.4 | 19.4 | 19.4  | 19.4 |
| >150              | 17.2      | 19.1 | 19.4 | 19.4 | 19.4 | 19.4 | 19.4  | 19.4 |
| >0                | 17.2      | 19.2 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5  | 19.5 |
| TOTAL             | 954       | 1061 | 1077 | 1079 | 1079 | 1080 | 1080  | 1080 |

TOTAL NUMBER OF OBS: 5536

PCT FREQ NH <5/8: 80.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL<br>OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-----|--------------|
| 34.8 | 15.7 | 13.2 | 9.9 | 6.4 | 4.8 | 5.6 | 4.6 | 5.1 | .1  | 5858         |

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24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |   |
|--------------|--------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|--------------|---|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |              |   |
|              | NO PCP | *    | *    | .0   | *   | .0  | *   | .0  | .0  | .0  | .0   | *    |              |   |
|              | TOT %  | *    | *    | .0   | *   | .0  | *   | .0  | .0  | .0  | .0   | *    |              |   |
| 1/2<1        | PCP    | .0   | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |              |   |
|              | NO PCP | *    | .1   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .2   |              |   |
|              | TOT %  | *    | .1   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .3   |              |   |
| 1<2          | PCP    | *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |              |   |
|              | NO PCP | *    | *    | .1   | *   | *   | .0  | .0  | .0  | .0  | .0   | .2   |              |   |
|              | TOT %  | *    | *    | .1   | *   | *   | .0  | .0  | .0  | .0  | .0   | .2   |              |   |
| 2<5          | PCP    | *    | *    | .0   | .0  | .0  | .0  | *   | *   | .0  | .0   | .1   |              |   |
|              | NO PCP | .1   | .6   | .1   | .0  | .0  | .0  | *   | .0  | .0  | *    | .8   |              |   |
|              | TOT %  | .1   | .6   | .1   | .0  | *   | .0  | *   | *   | .0  | *    | .9   |              |   |
| 5<10         | PCP    | .1   | .3   | .1   | *   | *   | .1  | .1  | .1  | .0  | .0   | .7   |              |   |
|              | NO PCP | 1.7  | 7.0  | 2.4  | .5  | .3  | .5  | .5  | .4  | .0  | .2   | 13.5 |              |   |
|              | TOT %  | 1.8  | 7.3  | 2.5  | .5  | .3  | .6  | .6  | .5  | .0  | .2   | 14.2 |              |   |
| 10+          | PCP    | .1   | .2   | .1   | *   | .0  | *   | *   | .1  | .0  | *    | .5   |              |   |
|              | NO PCP | 11.6 | 50.6 | 11.2 | 1.6 | 1.1 | 1.2 | 1.7 | 2.7 | .0  | 2.2  | 83.9 |              |   |
|              | TOT %  | 11.7 | 50.9 | 11.2 | 1.6 | 1.1 | 1.2 | 1.7 | 2.7 | .0  | 2.2  | 84.4 |              |   |
| TOT OBS      |        |      |      |      |     |     |     |     |     |     |      |      |              | 6609  |
| TOT PCT      |        |      |      |      |     |     |     |     |     |     |      |      |              | 13.6 58.9 14.0 2.1 1.5 1.8 2.3 3.2 .0 2.5 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                    |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|---|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *    |   |
|              | 4-10       | *    | *    | *    | *   | .0  | *   | .0  | .0  | .0  | *    | *    |   |
|              | 11-21      | .0   | *    | *    | *   | .0  | .0  | *   | .0  | .0  | *    | *    |   |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *    | .0  |
|              | TOT %      | *    | *    | *    | *   | .0  | *   | *   | .0  | .0  | *    | *    | .1  |
| 1/2<1        | 0-3        | *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    | *   |
|              | 4-10       | *    | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | *    | .1   | .1  |
|              | 11-21      | *    | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | *    | .1   | .1  |
|              | 22+        | .0   | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | *    | .1   | .1  |
|              | TOT %      | *    | .1   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .2   | .2  |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | *    | *    | *   |
|              | 4-10       | *    | *    | *    | *   | .0  | *   | .0  | .0  | .0  | *    | .1   | .1  |
|              | 11-21      | .0   | *    | .1   | *   | .0  | .0  | .0  | .0  | .0  | *    | .1   | .1  |
|              | 22+        | .0   | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | *    | *    | *   |
|              | TOT %      | *    | .1   | .1   | *   | *   | .0  | *   | .0  | .0  | *    | .3   | .3  |
| 2<5          | 0-3        | *    | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | .1   | .1   | .1  |
|              | 4-10       | *    | .1   | *    | *   | *   | *   | .0  | *   | .0  | *    | .2   | .2  |
|              | 11-21      | *    | .3   | .1   | *   | *   | *   | *   | .0  | .0  | *    | .6   | .6  |
|              | 22+        | .0   | .1   | .1   | *   | .0  | .0  | .0  | .0  | .0  | *    | .2   | .2  |
|              | TOT %      | .1   | .5   | .2   | *   | *   | *   | *   | *   | .0  | .1   | 1.0  | 1.0   |
| 5<10         | 0-3        | .1   | .1   | .1   | *   | .1  | .1  | *   | .1  | .0  | .4   | 1.0  | 1.0   |
|              | 4-10       | .7   | 1.7  | .7   | .3  | .2  | .3  | .1  | .2  | .0  | *    | 4.3  | 4.3   |
|              | 11-21      | .6   | 3.2  | 1.1  | .1  | .1  | .1  | .2  | .1  | .0  | *    | 5.5  | 5.5   |
|              | 22+        | .1   | 1.2  | .2   | *   | *   | .1  | .1  | *   | .0  | *    | 1.8  | 1.8   |
|              | TOT %      | 1.5  | 6.2  | 2.2  | .4  | .3  | .5  | .5  | .4  | .0  | .4   | 12.5 | 12.5  |
| 10+          | 0-3        | 1.0  | 1.2  | .8   | .2  | .3  | .3  | .4  | .2  | .0  | 2.3  | 6.8  | 6.8   |
|              | 4-10       | 5.3  | 16.3 | 5.8  | 1.3 | .9  | 1.0 | .9  | 1.7 | .0  | *    | 33.1 | 33.1  |
|              | 11-21      | 4.2  | 26.9 | 5.8  | .5  | .2  | .4  | .4  | .8  | .0  | *    | 39.3 | 39.3  |
|              | 22+        | .5   | 5.0  | .9   | *   | *   | *   | .1  | .1  | .0  | *    | 6.7  | 6.7   |
|              | TOT %      | 11.1 | 49.5 | 13.3 | 2.0 | 1.3 | 1.7 | 1.9 | 2.8 | .0  | 2.3  | 85.9 | 85.9  |
| TOT OBS      |            |      |      |      |     |     |     |     |     |     |      |      | 9416  |
| TOT PCT      |            |      |      |      |     |     |     |     |     |     |      |      | 12.7 56.4 15.9 2.6 1.7 2.2 2.5 3.2 .0 2.8 100.0 |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .1         | .0         | .1         | 1.4        | 5.0          | 4.2          | 2.5          | .4           | .7           | 1.1   | 15.5  | 84.5               | 1395         |
| 06009         | .1         | .0         | .1         | 2.3        | 7.5          | 5.9          | 3.0          | .4           | .7           | 1.9   | 21.9  | 78.1               | 1368         |
| 12015         | .1         | .0         | .1         | 2.2        | 6.9          | 5.7          | 2.5          | .9           | .8           | 1.3   | 20.4  | 79.6               | 1589         |
| 18021         | .1         | .0         | .1         | 1.7        | 5.3          | 5.7          | 2.4          | .6           | .7           | .8    | 17.5  | 82.5               | 1413         |
| TOT           | 5          | 0          | 7          | 109        | 357          | 311          | 149          | 92           | 42           | 74    | 1086  | 4679               | 5765         |
| PCT           | .1         | .0         | .1         | 1.9        | 6.2          | 5.4          | 2.6          | .6           | .7           | 1.3   | 18.8  | 81.2               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | 1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|-----|-------|-----|-----|------|------|--------------|
| 00003         | .0  | .2    | .2  | 1.3 | 11.9 | 86.4 | 2150         |
| 06009         | .1  | .2    | .3  | 1.1 | 14.3 | 84.0 | 2564         |
| 12015         | .2  | *     | .2  | .8  | 10.7 | 88.0 | 2290         |
| 18021         | .1  | .3    | .3  | .8  | 13.1 | 85.4 | 2618         |
| TOT           | 9   | 19    | 24  | 96  | 1210 | 8264 | 9622         |
| PCT           | .1  | .2    | .2  | 1.0 | 12.6 | 85.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .1            | .3         | 2.6         | 14.2            | 83.2              | 1336         |
| 06009         | .1            | .2         | 3.5         | 19.9            | 76.6              | 1299         |
| 12015         | .1            | .2         | 3.4         | 18.1            | 78.5              | 1535         |
| 18021         | .1            | .2         | 2.6         | 16.0            | 81.4              | 1366         |
| TOT           | 5             | 13         | 169         | 944             | 4423              | 5536         |
| PCT           | .1            | .2         | 3.1         | 17.1            | 79.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .0     | 1            | *           |
| 75/79  | .0   | .0    | .0    | .1    | .1    | .1    | *     | .0     | 16           | .3          |
| 70/74  | .0   | *     | .2    | .8    | 3.3   | 3.6   | 1.9   | .7     | 553          | 10.4        |
| 65/69  | .0   | *     | .7    | 4.2   | 16.0  | 27.7  | 19.4  | 5.5    | 9900         | 73.4        |
| 60/64  | .0   | .0    | .1    | .6    | 2.6   | 5.5   | 4.7   | 2.3    | 836          | 15.7        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | *      | 6            | .1          |
| TOTAL  | 0    | 3     | 49    | 296   | 1166  | 1960  | 1384  | 452    | 5310         | 100.0       |
| PCT    | .0   | .1    | .9    | 5.6   | 22.0  | 36.9  | 26.1  | 8.5    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|------|-----|-----|-----|-----|-----|-----|------|
| .0   | .0   | .0   | .0  | *   | *   | .0  | .0  | .0  | .0   |
| .1   | .1   | *    | *   | .0  | *   | *   | .0  | .0  | .0   |
| 1.9  | 4.9  | 1.7  | .5  | .2  | .3  | .3  | .5  | .0  | .2   |
| 9.1  | 44.8 | 10.0 | 1.5 | 1.1 | 1.1 | 1.5 | 2.6 | .0  | 1.7  |
| 2.2  | 10.2 | 2.3  | .2  | .1  | *   | .1  | .2  | .0  | .4   |
| .0   | *    | *    | .0  | .0  | .0  | .0  | *   | .0  | .0   |
| 13.3 | 60.0 | 14.1 | 2.2 | 1.4 | 1.5 | 2.0 | 3.3 | .0  | 2.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 72  | 70  | 66  | 63 | 61 | 50  | 66.4 | 2700         |
| 06009         | 79  | 72  | 70  | 66  | 63 | 61 | 54  | 66.3 | 3679         |
| 12015         | 82  | 77  | 74  | 68  | 64 | 62 | 57  | 68.5 | 2822         |
| 18021         | 82  | 75  | 73  | 67  | 64 | 62 | 54  | 67.7 | 3723         |
| TOT           | 82  | 75  | 72  | 67  | 63 | 61 | 50  | 67.2 | 12924        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 4.2   | 18.2  | 34.2  | 32.5  | 10.9   | 77   | 1334         |
| 06009         | .0   | 4.5   | 17.5  | 34.3  | 31.8  | 11.9   | 77   | 1345         |
| 12015         | .0   | 10.5  | 27.0  | 38.1  | 18.7  | 5.7    | 72   | 1424         |
| 18021         | .0   | 6.3   | 24.3  | 40.2  | 23.1  | 6.0    | 74   | 1374         |
| TOT           | 0    | 354   | 1197  | 2012  | 1445  | 469    | 75   | 5477         |

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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FUG | WD<br>FDG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 3     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | .1       | .0       | .1       | 12    | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | *        | *        | .2       | .1       | .0       | 24    | *        | .4        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .1       | .3       | *        | .0       | 36    | .0       | .6        |
| 6                  | .0       | .0       | .0       | .0       | .1       | .3       | .2       | *        | .0       | 36    | .0       | .6        |
| 5                  | .0       | .0       | .0       | .1       | .6       | .8       | .3       | *        | .0       | 112   | *        | 1.8       |
| 4                  | .0       | .0       | .0       | .1       | .8       | 1.1      | .2       | .0       | .0       | 135   | .0       | 2.2       |
| 3                  | .0       | .0       | .0       | .1       | 1.8      | 1.3      | .2       | .0       | .0       | 210   | .0       | 3.4       |
| 2                  | .0       | .0       | *        | .5       | 3.4      | 2.3      | .2       | *        | .0       | 394   | .1       | 6.4       |
| 1                  | .0       | .0       | .0       | 1.0      | 6.5      | 3.5      | .2       | *        | .0       | 682   | .1       | 11.1      |
| 0                  | .0       | .0       | *        | 2.7      | 10.2     | 4.2      | .1       | .0       | .0       | 1052  | .1       | 17.2      |
| -1                 | .0       | .0       | *        | 2.5      | 12.7     | 3.0      | *        | .0       | .0       | 1118  | .2       | 18.1      |
| -2                 | .0       | .0       | .1       | 2.4      | 10.6     | 1.6      | *        | .0       | .0       | 898   | .1       | 14.6      |
| -3                 | .0       | .0       | .0       | 2.0      | 7.1      | .6       | .0       | .0       | .0       | 598   | .1       | 9.7       |
| -4                 | .0       | .0       | .1       | 2.1      | 3.8      | .3       | .0       | .0       | .0       | 385   | *        | 6.3       |
| -5                 | .0       | .0       | .1       | 1.4      | 1.8      | .2       | .0       | .0       | .0       | 215   | *        | 3.5       |
| -6                 | .0       | .0       | *        | .5       | .6       | *        | .0       | .0       | .0       | 70    | .0       | 1.1       |
| -7/-8              | .0       | .0       | .2       | .4       | .5       | *        | .0       | .0       | .0       | 65    | .0       | 1.1       |
| -9/-10             | .0       | *        | .2       | .3       | .1       | *        | .0       | .0       | .0       | 42    | *        | .7        |
| -11/-13            | .0       | *        | *        | .1       | .0       | .0       | .0       | .0       | .0       | 7     | .0       | .1        |
| -14/-16            | *        | *        | .0       | *        | .0       | .0       | .0       | .0       | .0       | 5     | .0       | .1        |
| -17/-19            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 2        | 7        | 48       | 993      | 3708     | 1189     | 131      | 17       | 6        | 6101  | 43       | 6058      |
| PCT                | *        | .1       | .8       | 14.3     | 60.8     | 19.5     | 2.1      | .3       | .1       | 100.0 | .7       | 99.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | .9   | *     | .0    | .0    | .0  | 1.6  | .6  | 1.8  | .1    | .0    | .0    | .0  | 2.5  |
| 1-2     | .3  | 3.1  | 1.0   | .0    | .0    | .0  | 4.4  | .4  | 9.8  | 4.6   | .0    | .0    | .0  | 14.8 |
| 3-4     | *   | 1.6  | 2.6   | .1    | .0    | .0  | 4.4  | .0  | 4.6  | 12.9  | 1.0   | .0    | .0  | 18.4 |
| 5-6     | .0  | .2   | 1.6   | .3    | .0    | .0  | 2.1  | .0  | .9   | 10.6  | 1.7   | .1    | .0  | 13.3 |
| 7       | .0  | *    | 1.1   | .2    | .0    | .0  | 1.3  | *   | .1   | 4.5   | 2.2   | .1    | .0  | 6.9  |
| 8-9     | .0  | .1   | .3    | .1    | .0    | .0  | .5   | .0  | *    | 1.3   | 1.7   | .0    | .0  | 3.0  |
| 10-11   | .0  | .0   | .1    | *     | .0    | .0  | .1   | .0  | .0   | .4    | 1.0   | .1    | .0  | 1.4  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .2    | .3    | *     | .0  | .5   |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | *    | .0  | .0   | .1    | .2    | .2    | .0  | .4   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.0 | 6.0  | 6.8   | .7    | .0    | .0  | 14.5 | 1.0 | 17.2 | 34.6  | 8.0   | .4    | .0  | 61.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .5  | .8   | .0    | .0    | .0    | .0  | 1.3  | *   | .3   | .0    | .0    | .0    | .0  | .3  |
| 1-2     | .3  | 2.7  | 1.3   | .0    | .0    | .0  | 4.3  | *   | .5   | .1    | .0    | .0    | .0  | .6  |
| 3-4     | .0  | 1.4  | 2.2   | .1    | .0    | .0  | 3.7  | .0  | .2   | .2    | .0    | .0    | .0  | .4  |
| 5-6     | .0  | .4   | 1.6   | .2    | .0    | .0  | 2.3  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 7       | .0  | *    | .6    | .3    | .0    | .0  | 1.0  | .0  | .0   | .1    | *     | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .1    | .2    | .0    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | *     | *     | *   | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | *     | .0    | *     | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 5.4  | 5.9   | .9    | *     | .0  | 13.0 | .1  | 1.0  | .4    | *     | .0    | .0  | 1.5 |

PERIOD: (OVER-ALL) 1963-1973

DECEMBER  
TABLE 18 (CONT)AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

## PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .2  | .3   | .0    | .0    | .0    | .0  |  | .5  | .1  | .1   | .0    | .0    | .0    | .0  |  | .3  |
| 1-2     | .5  | .5   | .1    | .0    | .0    | .0  |  | .6  | .3  | .3   | .1    | .0    | .0    | .0  |  | .4  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  |  | .1  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .3  | .8   | .2    | .0    | .0    | .0  |  | 1.3 | .1  | .5   | .2    | .0    | .0    | .0  |  | .8  |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .2  | .2   | .0    | .0    | .0    | .0  |  | .4  | .2  | .1   | .0    | .0    | .0    | .0  |  | .4  |           |
| 1-2     | .1  | .5   | .0    | .0    | .0    | .0  |  | .6  | .7  | .1   | .1    | .0    | .0    | .0  |  | .8  |           |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  |  | .1  | .4  | .4   | .0    | .0    | .0    | .0  |  | .8  |           |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  |  | .2  | .1  | .3   | .0    | .0    | .0    | .0  |  | .4  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  | .0  | .2   | .1    | .0    | .0    | .0  |  | .3  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .1   | .0    | .0    | .0    | .0  |  | .1  |           |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  |  | .1  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .3  | .8   | .3    | .2    | .1    | .0  |  | 1.7 | .3  | 1.3  | 1.1   | .2    | .0    | .0  |  | 2.9 | 96.8      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.2 | 4.8  | .2    | .0    | .0    | .0  | 11.2  |         |
| 1-2     | 1.4 | 17.9 | 7.2   | .0    | .0    | .0  | 26.5  |         |
| 3-4     | .0  | 8.3  | 18.3  | 1.2   | .0    | .0  | 27.8  |         |
| 5-6     | .0  | 1.7  | 14.3  | 2.3   | .1    | .0  | 18.3  |         |
| 7       | .0  | .2   | 6.5   | 2.8   | .1    | .0  | 9.6   |         |
| 8-9     | .0  | .1   | 1.7   | 2.0   | .0    | .0  | 3.8   |         |
| 10-11   | .0  | .0   | .5    | 1.0   | .1    | .0  | 1.6   |         |
| 12      | .0  | .0   | .2    | .3    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | .1    | .3    | .2    | .0  | .6    |         |
| 17-19   | .0  | .0   | .0    | .0    | .1    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.7 | 33.0 | 48.9  | 9.9   | .5    | .0  | 100.0 | 3555    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

## PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.8 | 7.8  | 11.4 | 7.2  | 3.6  | 1.2 | .7    | .0  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1455  | 4        |
| 6-7          | .1  | 1.7  | 4.9  | 6.3  | 5.9  | 2.7 | 1.3   | .3  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1021  | 6        |
| 8-9          | .0  | .7   | 2.2  | 3.5  | 3.3  | 1.7 | 1.1   | .3  | .4    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 576   | 6        |
| 10-11        | .0  | .6   | .8   | 1.0  | .9   | .8  | .3    | .2  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 218   | 7        |
| 12-13        | .0  | .0   | 1.1  | .7   | .5   | .3  | .1    | .1  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 134   | 6        |
| >13          | .0  | .0   | .0   | .2   | .2   | .1  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 24    | 9        |
| INDET        | 3.3 | 4.3  | 5.4  | 2.9  | 2.6  | 1.1 | .5    | .1  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 883   | 4        |
| TOTAL        | 224 | 650  | 1110 | 933  | 733  | 337 | 171   | 52  | 68    | 24    | 3     | 2     | 4     | 0     | 0     | 0     | 0     | 0     | 0   | 4311  | 5        |
| PCT          | 5.2 | 15.1 | 25.7 | 21.6 | 17.0 | 7.8 | 4.0   | 1.2 | 1.6   | .6    | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FOG W/ PCPN | FOG W/ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
|                    |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |
| N                  | .2   | .3        | .1   | .0        | .0   | .0              | .0   | .5              | .3             | .4                      | 2.8         | .1                  | 3.4        | .4              | 92.0       |  |
| NE                 | .1   | .2        | .1   | .0        | .0   | .0              | *    | .5              | .2             | .3                      | 2.2         | *                   | 2.8        | .5              | 93.5       |  |
| E                  | .4   | .3        | .2   | .0        | .0   | .0              | *    | 1.0             | .5             | .8                      | 2.5         | *                   | 3.2        | .5              | 91.5       |  |
| SE                 | 1.8  | .7        | .1   | .0        | .0   | .0              | *    | 2.7             | .6             | 2.1                     | 4.7         | .1                  | 3.5        | .7              | 86.3       |  |
| S                  | 1.5  | 1.1       | .3   | .0        | .0   | .0              | .0   | 2.8             | .8             | 1.4                     | 3.0         | .4                  | 2.2        | .3              | 89.7       |  |
| SW                 | .4   | 1.2       | .4   | .0        | .0   | .0              | .0   | 2.0             | 1.1            | 1.4                     | 3.1         | .7                  | 1.1        | .1              | 90.5       |  |
| W                  | .6   | 1.2       | .2   | .0        | .0   | .0              | .0   | 1.9             | 1.4            | .5                      | 2.5         | .8                  | 2.6        | .1              | 90.3       |  |
| NW                 | .3   | 1.1       | .3   | .0        | .0   | .0              | *    | 1.7             | .6             | .4                      | 3.5         | .2                  | 2.2        | .3              | 91.1       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .3   | *         | *    | .0        | .0   | .0              | .0   | .3              | .3             | .6                      | 7.0         | .4                  | 3.1        | .2              | 88.1       |  |
| TOT PCT            | .2   | .3        | .1   | .0        | .0   | .0              | *    | .7              | .4             | .5                      | 2.7         | .1                  | 3.1        | .5              | 92.2       |  |
| TOT OBS: 78672     |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)  | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|----------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|                | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG W/<br>PCPN | FOG W/<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00603          | .3                 | .3           | .2   | .0           | .0   | .0                    | .0   | .7                      | .4                | 1.0          | 2.0            | *                         | 2.5           | .5                              | 93.0             |
| 06609          | .3                 | .4           | .2   | .0           | .0   | .0                    | *    | 1.0                     | .5                | .7           | 2.8            | .1                        | 2.2           | .4                              | 92.4             |
| 12615          | .2                 | .3           | .1   | .0           | .0   | .0                    | *    | .6                      | .4                | *            | 2.8            | .1                        | 3.5           | .6                              | 92.0             |
| 18621          | .2                 | .3           | .1   | .0           | .0   | .0                    | *    | .6                      | .2                | .2           | 3.1            | *                         | 4.0           | .6                              | 91.2             |
| TOT PCT        | .2                 | .3           | .1   | .0           | .0   | .0                    | *    | .7                      | .4                | .5           | 2.7            | .1                        | 3.1           | .5                              | 92.1             |
| TOT OBS: 80735 |                    |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |                  |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |        | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|--------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |        |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.1                | 9.6  | 11.4  | 1.8   | *     | *   |        | 24.0      | 11.7     | 26.8     | 29.4       | 23.8  | 18.5  | 21.1  | 24.1  | 26.6  | 23.8  |    |
| NE       | 1.0                | 15.7 | 31.0  | 6.1   | .1    | *   |        | 53.9      | 14.0     | 52.1     | 52.6       | 53.9  | 57.1  | 55.2  | 54.9  | 52.5  | 54.7  |    |
| E        | .4                 | 3.4  | 3.5   | .5    | *     | .0  |        | 7.9       | 11.8     | 6.4      | 5.0        | 7.8   | 11.3  | 9.4   | 6.6   | 6.6   | 7.8   |    |
| SE       | .2                 | .9   | .4    | *     | *     | *   |        | 1.5       | 8.5      | 1.1      | 1.1        | 1.5   | 2.0   | 2.1   | 1.0   | 1.3   | 1.3   |    |
| S        | .2                 | .8   | .4    | *     | *     | .0  |        | 1.4       | 8.6      | 1.4      | 1.2        | 1.4   | 1.2   | 1.7   | 1.8   | 1.5   | 1.1   |    |
| SW       | .3                 | 1.3  | .6    | .1    | *     | .0  |        | 2.3       | 8.6      | 2.4      | 2.4        | 2.4   | 2.0   | 2.4   | 2.2   | 2.4   | 2.0   |    |
| W        | .4                 | 1.6  | .6    | .1    | *     | .0  |        | 2.6       | 7.8      | 2.7      | 2.6        | 2.7   | 2.5   | 2.4   | 2.9   | 2.8   | 2.8   |    |
| NW       | .5                 | 2.6  | .9    | .1    | *     | .0  |        | 4.2       | 8.4      | 4.3      | 3.4        | 4.1   | 4.0   | 3.6   | 4.9   | 4.6   | 4.7   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |        | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 2.1                |      |       |       |       |     |        | 2.1       | .0       | 2.8      | 2.3        | 2.5   | 1.4   | 2.0   | 1.7   | 1.9   | 1.7   |    |
| TOT OBS  |                    |      |       |       |       |     | 150385 |           | 12.5     | 29178    | 1797       | 28859 | 13920 | 31270 | 1864  | 29820 | 13677 |    |
| TOT PCT  | 6.4                | 35.9 | 48.8  | 8.7   | .2    | *   |        | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 4.7                | 13.3 | 5.7   | .3    | *   |           | 24.0     | 11.7     | 27.0       | 22.1  | 21.3  | 25.7  |    |
| NE       | 5.3                | 29.2 | 18.1  | 1.2   | *   |           | 53.9     | 14.0     | 52.1       | 54.9  | 55.2  | 53.2  |    |
| E        | 1.6                | 4.5  | 1.7   | .1    | *   |           | 7.9      | 11.8     | 6.3        | 9.0   | 9.2   | 7.0   |    |
| SE       | .6                 | .7   | .1    | *     | *   |           | 1.5      | 8.5      | 1.1        | 1.6   | 2.0   | 1.3   |    |
| S        | .7                 | .6   | .1    | *     | *   |           | 1.4      | 8.6      | 1.4        | 1.3   | 1.7   | 1.4   |    |
| SW       | 1.0                | 1.1  | .2    | *     | *   |           | 2.3      | 8.6      | 2.4        | 2.2   | 2.4   | 2.3   |    |
| W        | 1.2                | 1.2  | .2    | *     | *   |           | 2.6      | 7.8      | 2.7        | 2.6   | 2.4   | 2.8   |    |
| NW       | 1.8                | 2.0  | .3    | *     | *   |           | 4.2      | 8.4      | 4.2        | 4.1   | 3.7   | 4.6   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.1                |      |       |       |     |           | 2.1      | .0       | 2.7        | 2.1   | 2.0   | 1.8   |    |
| TOT OBS  |                    |      |       |       |     | 150385    |          | 12.5     | 30975      | 42779 | 33134 | 43497 |    |
| TOT PCT  | 19.1               | 52.7 | 26.5  | 1.7   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

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24.7N 16.6W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 2.7  | 4.3 | 35.4 | 48.3               | 9.1   | .2    | *   | 12.5  | 100.0    | 30975     |
| 06009 | 2.1  | 4.0 | 36.6 | 48.3               | 8.7   | .2    | *   | 12.4  | 100.0    | 42779     |
| 12015 | 2.0  | 4.2 | 34.6 | 49.8               | 9.3   | .2    | .0  | 12.7  | 100.0    | 33134     |
| 18021 | 1.8  | 4.4 | 36.6 | 49.0               | 8.0   | .2    | *   | 12.3  | 100.0    | 43497     |
| TOT   |      |     |      |                    |       |       |     | 12.5  |          | 150385    |
| PCT   | 2.1  | 4.2 | 35.9 | 48.8               | 8.7   | .2    | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 17.1 | 4.2  | 4.7  | 2.4          | 2.4          | 2.4                    |
| NE       | 27.4 | 8.7  | 10.7 | 4.5          | 2.8          | 2.8                    |
| E        | 3.0  | .9   | 1.1  | .4           | 3.0          | 3.0                    |
| SE       | .6   | .2   | .3   | .2           | 3.4          | 3.4                    |
| S        | .7   | .3   | .5   | .2           | 3.1          | 3.1                    |
| SW       | 1.2  | .6   | .7   | .2           | 3.0          | 3.0                    |
| W        | 1.4  | .6   | .5   | .1           | 3.0          | 3.0                    |
| NW       | 2.3  | .9   | .7   | .3           | 2.7          | 2.7                    |
| VAR      | .0   | .0   | .0   | .0           | .0           | .0                     |
| CALM     | 1.8  | .4   | .3   | .2           | 2.1          | 2.1                    |
| TOT OBS  |      |      |      |              | 64141        | 2.7                    |
| TOT PCT  | 55.4 | 16.7 | 19.5 | 8.3          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| .1         | *          | .1         | .7         | 1.7          | 1.5          | .6           | .2           | .1           | .4    | 23.1               |              |
| .1         | *          | .2         | 1.2        | 3.8          | 3.1          | 1.5          | .4           | .2           | .7    | 40.0               |              |
| *          | *          | *          | .1         | .3           | .3           | .1           | *            | *            | .1    | 4.4                |              |
| *          | .0         | *          | *          | .1           | .1           | *            | *            | *            | *     | .9                 |              |
| *          | *          | *          | .1         | .2           | .1           | .1           | *            | *            | *     | 1.3                |              |
| *          | *          | *          | .1         | .2           | .1           | .1           | *            | *            | *     | 2.0                |              |
| *          | .0         | *          | *          | .1           | .1           | .1           | *            | *            | *     | 2.2                |              |
| *          | *          | *          | .1         | .2           | .2           | .1           | *            | *            | *     | 3.6                |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| *          | .0         | *          | *          | .1           | .1           | *            | *            | *            | *     | 2.2                |              |
| .3         | .1         | .3         | 2.2        | 6.4          | 5.5          | 2.6          | .8           | .5           | 1.3   | 79.8               | 64141        |
|            |            |            |            |              |              |              |              |              |       |                    | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            | OR           |              |               |            | OR<br>>0 |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|----------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |          |
| = OR >6500        | 1.2         | 1.7        | 1.8        | 1.9        | 1.9          | 1.9          | 1.9           | 1.9        | 1.9      |
| = OR >5000        | 1.8         | 2.5        | 2.6        | 2.6        | 2.6          | 2.6          | 2.6           | 2.6        | 2.6      |
| = OR >3500        | 3.8         | 5.0        | 5.2        | 5.2        | 5.2          | 5.2          | 5.2           | 5.2        | 5.2      |
| = OR >2000        | 7.8         | 10.3       | 10.7       | 10.7       | 10.7         | 10.7         | 10.8          | 10.8       | 10.8     |
| = OR >1000        | 12.7        | 16.6       | 17.3       | 17.3       | 17.3         | 17.3         | 17.3          | 17.3       | 17.3     |
| = OR >600         | 14.1        | 18.7       | 19.5       | 19.5       | 19.5         | 19.5         | 19.5          | 19.5       | 19.5     |
| = OR >300         | 14.2        | 18.9       | 19.8       | 19.8       | 19.8         | 19.9         | 19.9          | 19.9       | 19.9     |
| = OR >150         | 14.2        | 19.0       | 19.8       | 19.9       | 19.9         | 19.9         | 19.9          | 19.9       | 19.9     |
| = OR >0           | 14.3        | 19.0       | 20.0       | 20.0       | 20.1         | 20.1         | 20.2          | 20.2       | 20.2     |

TOTAL NUMBER OF OBS: 65313

PCT FREQ NH <5/8: 79.8

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | 8 OBSCD | TOTAL<br>OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|---------|--------------|
| 37.4 | 14.7 | 12.2 | 8.9 | 6.0 | 4.2 | 5.0 | 5.0 | 6.4 | .2      | 68681        |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1894-1973

ANNUAL

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0  | .0  | *   | *   | .0  | .0  | .0   | *     |              |
|              | NO PCP | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
|              | TOT %  | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
| 1/2<1        | PCP    | *    | *    | *   | *   | *   | *   | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | .2   | .4   | .1  | *   | *   | *   | *   | *   | .0  | *    | .7    |              |
|              | TOT %  | .2   | .4   | .1  | *   | *   | *   | *   | *   | .0  | *    | .8    |              |
| 1<2          | PCP    | *    | *    | .0  | .0  | *   | *   | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | .1   | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .5    |              |
|              | TOT %  | .2   | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .5    |              |
| 2<5          | PCP    | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | *     |              |
|              | NO PCP | 1.1  | 1.2  | .1  | .1  | *   | *   | *   | .1  | .0  | .1   | 2.7   |              |
|              | TOT %  | 1.1  | 1.2  | .1  | .1  | *   | *   | *   | .1  | .0  | .1   | 2.8   |              |
| 5<10         | PCP    | *    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .4    |              |
|              | NO PCP | 7.3  | 12.0 | 1.3 | .3  | .3  | .4  | .4  | .7  | .0  | .4   | 23.3  |              |
|              | TOT %  | 7.3  | 12.1 | 1.4 | .4  | .4  | .5  | .5  | .8  | .0  | .4   | 23.6  |              |
| 10+          | PCP    | *    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
|              | NO PCP | 19.0 | 37.0 | 4.2 | .9  | 1.3 | 2.1 | 2.1 | 3.4 | .0  | 1.9  | 72.0  |              |
|              | TOT %  | 19.1 | 37.1 | 4.2 | .9  | 1.3 | 2.1 | 2.2 | 3.4 | .0  | 1.9  | 72.2  |              |
| TOT OBS      |        |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |     |     |     |      |       |              |
|              |        | 27.9 | 51.1 | 5.8 | 1.3 | 1.8 | 2.7 | 2.7 | 4.3 | .0  | 2.4  | 100.0 | 78495        |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | *   | .0  | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | *    | *    | *   | *   | .0  | *   | *   | .0  | .0  | *    | *     |              |
|              | 22+        | *    | *    | .0  | *   | *   | .0  | .0  | .0  | .0  | *    | *     |              |
|              | TOT %      | *    | *    | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | *    | *    | *   | *   | .0  | *   | *   | *   | .0  | *    | *     |              |
|              | 4-10       | *    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .2    |              |
|              | 11-21      | .1   | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .3    |              |
|              | 22+        | *    | *    | *   | *   | .0  | .0  | .0  | *   | .0  | *    | .1    |              |
|              | TOT %      | .2   | .3   | .1  | *   | *   | *   | *   | *   | .0  | *    | .6    |              |
| 1<2          | 0-3        | *    | *    | *   | .0  | *   | .0  | .0  | *   | .0  | *    | *     |              |
|              | 4-10       | *    | .1   | *   | *   | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | .1   | .2   | *   | *   | *   | .0  | .0  | *   | .0  | *    | .3    |              |
|              | 22+        | *    | *    | *   | *   | *   | .0  | .0  | .0  | .0  | *    | *     |              |
|              | TOT %      | .1   | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .5    |              |
| 2<5          | 0-3        | *    | *    | *   | *   | *   | *   | *   | *   | .0  | .1   | .2    |              |
|              | 4-10       | .3   | .3   | .1  | *   | *   | *   | *   | .1  | .0  | *    | .7    |              |
|              | 11-21      | .5   | .7   | .1  | *   | *   | *   | *   | *   | .0  | *    | 1.4   |              |
|              | 22+        | .1   | .2   | *   | *   | *   | *   | *   | *   | .0  | *    | .4    |              |
|              | TOT %      | 1.0  | 1.3  | .1  | .1  | *   | *   | *   | .1  | .0  | .1   | 2.7   |              |
| 5<10         | 0-3        | .2   | .2   | .1  | *   | *   | .1  | .1  | .1  | .0  | .4   | 1.0   |              |
|              | 4-10       | 2.0  | 2.5  | .5  | .2  | .2  | .2  | .2  | .4  | .0  | *    | 6.1   |              |
|              | 11-21      | 3.6  | 7.1  | .6  | .1  | .1  | .1  | .1  | .2  | .0  | *    | 11.9  |              |
|              | 22+        | .7   | 1.9  | .1  | *   | *   | *   | *   | *   | .0  | *    | 2.8   |              |
|              | TOT %      | 6.5  | 11.7 | 1.3 | .3  | .3  | .4  | .4  | .7  | .0  | .4   | 21.9  |              |
| 10+          | 0-3        | .9   | .8   | .3  | .1  | .2  | .2  | .3  | .4  | .0  | 1.8  | 5.0   |              |
|              | 4-10       | 7.7  | 11.8 | 2.4 | .6  | .6  | 1.1 | 1.3 | 2.2 | .0  | *    | 27.9  |              |
|              | 11-21      | 8.4  | 23.0 | 2.3 | .3  | .3  | .5  | .5  | .7  | .0  | *    | 35.9  |              |
|              | 22+        | 1.1  | 3.9  | .3  | *   | *   | *   | *   | *   | .0  | *    | 5.4   |              |
|              | TOT %      | 18.2 | 39.5 | 5.2 | 1.0 | 1.1 | 1.9 | 2.1 | 3.4 | .0  | 1.8  | 74.2  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |     |     |     |      |       |              |
|              |            | 26.0 | 52.9 | 6.8 | 1.4 | 1.5 | 2.4 | 2.6 | 4.1 | .0  | 2.3  | 100.0 | 109819       |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0005 CENTRAL SPANISH SAMARA  
24.7N 16.6W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS   |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|----------------|
| 00003         | .3         | *          | .2         | 1.7        | 4.8          | 4.0          | 1.7          | .6           | .4           | 1.0   | 14.7  | 85.3                | 16381          |
| 06009         | .3         | .1         | .6         | 3.4        | 10.1         | 7.6          | 3.5          | .9           | .6           | 1.6   | 28.7  | 71.3                | 15873          |
| 12015         | .3         | .1         | .4         | 2.2        | 6.9          | 6.5          | 2.9          | .9           | .6           | 1.5   | 22.2  | 77.8                | 18221          |
| 18021         | .2         | *          | .2         | 1.3        | 3.9          | 3.6          | 2.0          | .6           | .4           | 1.1   | 13.3  | 86.7                | 17173          |
| TOT<br>PCT    | .3         | .1         | .3         | 2.1        | 6.4          | 5.4          | 2.5          | .7           | .5           | 1.3   | 19.6  | 80.4                | 67648<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2-1 | 1-2 | 2-5 | 5-10 | 10+  | TOTAL<br>OBS    |
|---------------|------|-------|-----|-----|------|------|-----------------|
| 00003         | .1   | .5    | .3  | 2.5 | 21.0 | 75.6 | 24907           |
| 06009         | .2   | .7    | .4  | 2.5 | 24.1 | 72.1 | 29764           |
| 12015         | .2   | .5    | .5  | 3.3 | 19.9 | 75.7 | 26550           |
| 18021         | .1   | .7    | .7  | 2.8 | 22.4 | 73.1 | 30671           |
| TOT<br>PCT    | .2   | .6    | .5  | 2.8 | 22.0 | 74.0 | 111892<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS   |
|---------------|--------------|------------|-------------|-----------------|--------------------|----------------|
| 00003         | .3           | .5         | 4.6         | 12.5            | 82.9               | 15720          |
| 06009         | .3           | 1.1        | 7.2         | 24.1            | 68.8               | 15253          |
| 12015         | .3           | .8         | 6.2         | 18.7            | 75.1               | 17670          |
| 18021         | .2           | .5         | 4.8         | 11.4            | 83.8               | 16670          |
| TOT<br>PCT    | .3           | .7         | 5.7         | 16.6            | 77.7               | 65313<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94        | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | *            | *           |
| 85/89        | .0   | .0    | *     | *     | *     | *     | .0    | .0     | *            | *           |
| 80/84        | .0   | *     | *     | *     | .1    | .1    | *     | *      | .3           | *           |
| 75/79        | *    | *     | .1    | .7    | 2.2   | 1.5   | .4    | .0     | 5.0          | *           |
| 70/74        | *    | *     | .1    | .4    | 2.9   | 9.5   | 15.5  | 7.4    | 35.8         | *           |
| 65/69        | .0   | *     | .1    | 1.3   | 5.7   | 13.6  | 17.7  | 7.9    | 46.3         | *           |
| 60/64        | .0   | *     | *     | .2    | 1.8   | 4.3   | 4.1   | 2.0    | 12.5         | *           |
| 55/59        | .0   | .0    | .0    | *     | *     | *     | *     | *      | .1           | *           |
| TOTAL<br>PCT | *    | *     | .3    | 2.1   | 11.2  | 29.8  | 38.8  | 17.8   | 61292        | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| *    | *    | .0  | *   | *   | *   | *   | *   | .0  | *    |
| .1   | .1   | *   | *   | *   | *   | *   | *   | .0  | *    |
| 1.6  | 2.5  | .2  | .1  | *   | .1  | .1  | .2  | .0  | .1   |
| 10.9 | 18.4 | 1.7 | .4  | .5  | .9  | .8  | 1.4 | .0  | .6   |
| 12.1 | 23.7 | 3.0 | .7  | .9  | 1.3 | 1.5 | 2.2 | .0  | 1.0  |
| 2.7  | 7.5  | 1.0 | .1  | .1  | .2  | .2  | .4  | .0  | .2   |
| *    | *    | *   | *   | *   | .0  | .0  | *   | .0  | *    |
| 27.5 | 52.4 | 5.9 | 1.3 | 1.7 | 2.5 | 2.6 | 4.2 | .0  | 1.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 73  | 71  | 68  | 64 | 62 | 46  | 67.7 | 31391        |
| 06009         | 86  | 74  | 72  | 68  | 64 | 62 | 48  | 67.6 | 42946        |
| 12015         | 90  | 79  | 76  | 70  | 66 | 63 | 52  | 70.4 | 32602        |
| 18021         | 90  | 78  | 75  | 69  | 66 | 64 | 49  | 69.8 | 42927        |
| TOT           | 90  | 77  | 74  | 69  | 65 | 62 | 46  | 68.9 | 149866       |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | *    | 1.1   | 7.1   | 23.7  | 42.2  | 25.8   | 83   | 13364        |
| 06009         | *    | 1.6   | 8.1   | 24.0  | 41.9  | 24.4   | 82   | 13394        |
| 12015         | .0   | 4.4   | 16.2  | 36.5  | 33.6  | 9.4    | 77   | 13973        |
| 18021         | .0   | 2.3   | 13.1  | 34.1  | 37.6  | 12.9   | 79   | 16055        |
| TOT           | 2    | 1484  | 7015  | 18644 | 24336 | 11305  | 80   | 62786        |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>48 | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | *        | *        | .0       | 6     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *        | .0       | 20    | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *        | *        | .0       | 73    | *        | .1        |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | *        | .1       | .1       | .1       | *        | .0       | 285   | *        | .4        |
| 9/10               | .0       | .0       | .0       | .0       | *        | *        | .1       | .2       | .2       | .1       | *        | .0       | 486   | *        | .6        |
| 7/8                | .0       | .0       | .0       | .0       | *        | .1       | .4       | .6       | .3       | .1       | .0       | .0       | 1086  | .1       | 1.4       |
| 6                  | .0       | .0       | .0       | *        | *        | .1       | .4       | .6       | .2       | *        | *        | .0       | 906   | .1       | 1.2       |
| 5                  | .0       | .0       | .0       | *        | .1       | .5       | 1.1      | 1.1      | .3       | *        | *        | .0       | 2209  | .1       | 2.9       |
| 4                  | .0       | .0       | .0       | *        | .2       | .8       | 1.9      | 1.3      | .3       | *        | .0       | .0       | 3199  | .2       | 4.2       |
| 3                  | .0       | .0       | .0       | *        | .2       | 1.5      | 2.7      | 1.7      | .2       | *        | *        | .0       | 4509  | .2       | 6.0       |
| 2                  | .0       | .0       | *        | *        | .5       | 3.2      | 4.6      | 2.0      | .2       | *        | .0       | .0       | 7632  | .4       | 10.2      |
| 1                  | .0       | .0       | .0       | *        | 1.0      | 5.5      | 6.5      | 2.3      | .1       | .0       | *        | .0       | 11021 | .4       | 14.9      |
| 0                  | .0       | .0       | .0       | *        | 2.3      | 7.6      | 6.7      | 1.9      | .1       | *        | *        | .0       | 13489 | .5       | 18.2      |
| -1                 | .0       | .0       | .0       | .1       | 2.4      | 6.9      | 4.8      | 1.2      | *        | *        | .0       | .0       | 11093 | .3       | 15.1      |
| -2                 | .0       | .0       | *        | .1       | 2.3      | 4.9      | 2.7      | .5       | *        | .0       | .0       | .0       | 7194  | .2       | 9.8       |
| -3                 | .0       | .0       | .0       | .1       | 1.6      | 2.3      | 1.3      | .2       | *        | .0       | .0       | .0       | 3953  | .1       | 5.4       |
| -4                 | .0       | *        | .0       | .1       | 1.2      | 1.2      | .6       | .1       | *        | .0       | .0       | .0       | 2223  | .1       | 3.0       |
| -5                 | .0       | .0       | *        | .1       | .7       | .7       | .3       | *        | *        | .0       | .0       | .0       | 1328  | *        | 1.8       |
| -6                 | .0       | .0       | *        | .2       | .2       | .1       | *        | *        | .0       | .0       | .0       | .0       | 438   | *        | .6        |
| -7/-8              | .0       | .0       | *        | .1       | .2       | .2       | .1       | *        | .0       | .0       | .0       | .0       | 481   | *        | .6        |
| -9/-10             | .0       | *        | *        | .1       | .1       | .1       | *        | *        | .0       | .0       | .0       | .0       | 226   | *        | .3        |
| -11/-13            | *        | *        | *        | *        | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | 124   | *        | .2        |
| -14/-16            | *        | *        | *        | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 57    | *        | .1        |
| -17/-19            | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 12    | *        | *         |
| -20/-22            | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 18    | *        | *         |
| -23/-25            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              |          |          |          |          |          |          |          |          |          |          |          |          | 72069 |          |           |
| PCT                | *        | .1       | .1       | .7       | 13.0     | 35.4     | 34.3     | 13.9     | 2.1      | .4       | *        | *        | 100.0 | 2.9      | 97.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | 1.6  | .1    | .0    | .0    | .0  | 2.3  | .4  | 1.4  | .1    | .0    | .0    | .0  | 1.9  |
| 1-2     | .3  | 5.2  | 2.1   | .0    | .0    | .0  | 7.6  | .3  | 6.6  | 4.1   | .0    | .0    | .0  | 11.0 |
| 3-4     | *   | 2.9  | 5.7   | .3    | .0    | .0  | 8.9  | *   | 3.7  | 10.7  | .8    | .0    | .0  | 15.2 |
| 5-6     | *   | .5   | 4.4   | .6    | *     | .0  | 5.5  | *   | .9   | 9.3   | 1.7   | *     | .0  | 11.9 |
| 7       | .0  | .1   | 2.0   | .7    | *     | .0  | 2.8  | *   | .1   | 4.3   | 1.8   | *     | *   | 6.3  |
| 8-9     | .0  | *    | .6    | .5    | *     | .0  | 1.1  | .0  | *    | 1.4   | 1.2   | *     | .0  | 2.6  |
| 10-11   | .0  | *    | .2    | .3    | *     | .0  | .5   | .0  | *    | .7    | .7    | *     | .0  | 1.2  |
| 12      | .0  | *    | .1    | *     | *     | .0  | .1   | .0  | *    | .1    | .2    | *     | .0  | .3   |
| 13-16   | .0  | .0   | *     | *     | *     | .0  | .1   | .0  | *    | .1    | *     | *     | .0  | .2   |
| 17-19   | .0  | *    | .0    | *     | *     | .0  | *    | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 20-22   | .0  | .0   | .0    | *     | *     | .0  | *    | .0  | .0   | *     | *     | *     | .0  | *    |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.0 | 10.3 | 15.1  | 2.4   | *     | .0  | 28.8 | .7  | 12.7 | 30.7  | 6.5   | .2    | *   | 50.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .4   | *     | .0    | .0    | .0  | .6  | .1  | .2   | *     | .0    | .0    | .0  | .2  |
| 1-2     | .1  | 1.3  | .4    | .0    | .0    | .0  | 1.8 | .1  | .3   | .1    | .0    | .0    | .0  | .5  |
| 3-4     | *   | .6   | .9    | .0    | .0    | .0  | 1.6 | *   | .1   | .1    | *     | .0    | .0  | .3  |
| 5-6     | .0  | .1   | .6    | .1    | .0    | .0  | .8  | .0  | *    | .1    | *     | .0    | .0  | .1  |
| 7       | .0  | *    | .2    | *     | .0    | .0  | .3  | .0  | *    | *     | *     | *     | .0  | .1  |
| 8-9     | .0  | *    | .1    | *     | .0    | .0  | .1  | .0  | *    | *     | *     | .0    | .0  | *   |
| 10-11   | .0  | *    | *     | *     | .0    | .0  | *   | .0  | *    | *     | *     | .0    | .0  | *   |
| 12      | .0  | *    | *     | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| TOT PCT | .3  | 2.5  | 2.2   | .2    | *     | .0  | 9.1 | .1  | .7   | .4    | *     | .0    | .0  | 1.2 |

PERIOD: (OVER-ALL) 1963-1973

ANNUAL  
TABLE 18 (CONT)AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

## PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .3  | .1  | .3   | *     | .0    | .0    | .0  | .5  |           |
| 1-2     | .1  | .2   | .1    | .0    | .0    | .0  | .7  | .1  | .7   | .2    | .0    | .0    | .0  | 1.0 |           |
| 3-4     | *   | .2   | .2    | *     | .0    | .0  | .4  | *   | .3   | .3    | *     | .0    | .0  | .6  |           |
| 5-6     | .0  | *    | .1    | *     | .0    | .0  | .2  | *   | *    | .2    | *     | .0    | .0  | .3  |           |
| 7       | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | *    | *     | *     | .0    | .0  | .1  |           |
| 8-9     | .0  | *    | *     | *     | *     | .0  | *   | *   | *    | *     | *     | *     | .0  | *   |           |
| 10-11   | .0  | *    | *     | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 12      | .0  | *    | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 13-16   | .0  | *    | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | *     | *     | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | 1.0  | .5    | *     | *     | .0  | 1.7 | .2  | 1.4  | .7    | .1    | *     | .0  | 2.5 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .3   | *     | .0    | .0    | .0  | .6  | .3  | .6   | *     | .0    | .0    | .0  | .9  |           |
| 1-2     | .1  | .9   | .1    | .0    | .0    | .0  | 1.2 | .1  | 1.4  | .2    | .0    | .0    | .0  | 1.7 |           |
| 3-4     | *   | .3   | .2    | *     | .0    | .0  | .5  | *   | .5   | .4    | *     | .0    | .0  | .8  |           |
| 5-6     | .0  | *    | .1    | *     | .0    | .0  | .2  | .0  | .1   | .3    | *     | .0    | .0  | .3  |           |
| 7       | *   | *    | *     | *     | .0    | .0  | .1  | *   | *    | .1    | *     | .0    | .0  | .1  |           |
| 8-9     | .0  | *    | *     | *     | .0    | .0  | *   | .0  | *    | *     | *     | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | *    | *     | *     | .0    | .0  | *   |           |
| 12      | .0  | *    | .0    | *     | .0    | .0  | *   | .0  | *    | *     | *     | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | 1.5  | .6    | *     | *     | .0  | 2.5 | .4  | 2.5  | 1.0   | .1    | .0    | .0  | 4.0 | 96.5      |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+     | PCT   | TOT DBS |
|---------|-----|------|-------|-------|-------|---------|-------|---------|
| <1      | 6.0 | 5.1  | .4    | .0    | .0    | .0      | 11.4  |         |
| 1-2     | 1.3 | 16.8 | 7.3   | .0    | .0    | .0      | 25.5  |         |
| 3-4     | .1  | 8.4  | 18.3  | 1.1   | .0    | .0      | 27.9  |         |
| 5-6     | *   | 1.7  | 14.9  | 2.4   | *     | .0      | 19.1  |         |
| 7       | *   | .3   | 6.7   | 2.7   | *     | *       | 9.7   |         |
| 8-9     | *   | .1   | 2.1   | 1.7   | *     | .0      | 3.9   |         |
| 10-11   | .0  | *    | .7    | 1.0   | *     | .0      | 1.7   |         |
| 12      | .0  | *    | .1    | .3    | *     | .0      | .5    |         |
| 13-16   | .0  | *    | .1    | .2    | *     | .0      | .3    |         |
| 17-19   | .0  | *    | .0    | *     | *     | .0      | *     |         |
| 20-22   | .0  | .0   | *     | *     | *     | .0      | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| TOT PCT | 7.5 | 32.3 | 50.6  | 9.3   | .2    | * 100.0 | 42495 |         |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

## PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.5 | 8.1  | 11.1 | 7.0  | 3.2  | 1.2 | .5    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 18905 | 4        |
| 6-7          | *   | 1.2  | 5.4  | 7.4  | 5.7  | 2.7 | 1.3   | .4  | .2    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12570 | 6        |
| 8-9          | *   | .5   | 1.8  | 3.1  | 3.3  | 1.9 | 1.1   | .3  | .3    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6435  | 6        |
| 10-11        | .0  | .6   | .7   | .9   | 1.0  | .7  | .5    | .2  | .2    | *     | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0  | 2382  | 6        |
| 12-13        | .0  | .0   | 1.0  | .6   | .4   | .3  | .3    | .1  | .2    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1330  | 6        |
| >13          | .0  | .0   | .0   | .0   | .2   | .1  | .1    | .1  | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 460   | 6        |
| INDET        | 3.5 | 4.0  | 5.3  | 3.7  | 2.8  | 1.4 | .7    | .2  | .2    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 11181 | 4        |
| TOTAL PCT    | 5.0 | 14.3 | 25.2 | 22.9 | 16.6 | 8.3 | 4.6   | 1.5 | 1.2   | .2    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0  | 51663 | 5        |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

TABLE 20

AREA 0005 CENTRAL SPANISH SAHARA  
24.7N 16.6W

| PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH |       |       |       |       |       |       |       |       |       |       |       |       |        |       |  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--|
| SEA TMP<br>DEG F   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   | OCT   | NOV   | DEC   | ANN    | PCT   |  |
| 96+  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 95/96  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 93/94  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 91/92  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 89/90  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 87/88  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 85/86  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 83/84  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 81/82  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 79/80  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 77/78  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 75/76  | .1    | .1    | .2    | .1    | .2    | .4    | .3    | .4    | .3    | .5    | .1    | .2    | 3198   | 2.2   |  |
| 73/74  | .4    | .3    | .6    | .3    | .8    | 2.6   | 8.8   | 20.5  | 30.1  | 32.8  | 15.0  | 1.8   | 13171  | 9.2   |  |
| 71/72  | 1.7   | 1.2   | 1.9   | 1.3   | 2.9   | 13.1  | 25.5  | 33.1  | 28.8  | 28.8  | 31.6  | 9.5   | 21028  | 14.8  |  |
| 69/70  | 8.3   | 6.1   | 7.5   | 8.1   | 15.8  | 30.0  | 32.3  | 24.1  | 18.0  | 15.2  | 27.0  | 24.3  | 25802  | 18.1  |  |
| 67/68  | 28.5  | 21.9  | 23.1  | 27.6  | 35.8  | 31.7  | 20.6  | 12.6  | 9.6   | 8.0   | 15.3  | 33.2  | 31987  | 22.4  |  |
| 65/66  | 34.4  | 35.6  | 34.2  | 34.8  | 27.0  | 14.2  | 8.5   | 2.5   | 2.3   | 2.5   | 5.1   | 18.6  | 26402  | 18.5  |  |
| 63/64  | 21.0  | 27.4  | 26.1  | 22.6  | 14.2  | 6.5   | 2.3   | .4    | .4    | .7    | 1.8   | 10.0  | 16064  | 11.3  |  |
| 61/62  | 4.6   | 6.2   | 5.4   | 4.2   | 2.6   | .9    | .1    | .1    | .1    | .1    | .2    | 1.8   | 3181   | 2.2   |  |
| 59/60  | .7    | 1.1   | .8    | .8    | .6    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | 3      | .4    |  |
| 57/58  | .2    | .1    | .1    | .0    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | 76     | .1    |  |
| 55/56  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 35     | .0    |  |
| 53/54  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 35     | .0    |  |
| 51/52  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 2      | .0    |  |
| 49/50  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 1      | .0    |  |
| 47/48  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 45/46  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 43/44  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 41/42  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 39/40  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 37/38  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 35/36  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 33/34  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 31/32  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 29/30  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| 27/28  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| <27  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |  |
| TOTAL  | 11524 | 11530 | 12942 | 12174 | 12201 | 11400 | 12033 | 12255 | 10642 | 11659 | 11884 | 12250 | 142494 | 100.0 |  |
| MEAN   | 65.9  | 65.4  | 65.6  | 65.8  | 66.7  | 68.2  | 69.6  | 71.0  | 71.6  | 71.8  | 70.3  | 67.6  | 68.2   |       |  |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000  | 0300 | 0600  | 0900 | 1200  | 1500 | 1800  | 2100 | MEAN | TOTAL<br>OBS |
|-----|-------|------|-------|------|-------|------|-------|------|------|--------------|
| JAN | 1020  | 1018 | 1019  | 1020 | 1020  | 1017 | 1018  | 1019 | 1019 | 8196         |
| FEB | 1018  | 1017 | 1017  | 1019 | 1019  | 1016 | 1017  | 1019 | 1018 | 8378         |
| MAR | 1018  | 1017 | 1017  | 1018 | 1018  | 1017 | 1016  | 1018 | 1017 | 9405         |
| APR | 1018  | 1016 | 1017  | 1017 | 1018  | 1017 | 1016  | 1017 | 1017 | 8689         |
| MAY | 1017  | 1016 | 1016  | 1018 | 1018  | 1017 | 1016  | 1017 | 1017 | 8768         |
| JUN | 1018  | 1016 | 1017  | 1018 | 1018  | 1017 | 1017  | 1018 | 1017 | 8257         |
| JUL | 1016  | 1015 | 1015  | 1016 | 1017  | 1016 | 1015  | 1016 | 1016 | 8584         |
| AUG | 1015  | 1014 | 1014  | 1015 | 1015  | 1014 | 1014  | 1015 | 1015 | 8919         |
| SEP | 1016  | 1016 | 1016  | 1016 | 1017  | 1016 | 1015  | 1016 | 1016 | 7619         |
| OCT | 1017  | 1016 | 1016  | 1017 | 1017  | 1016 | 1016  | 1017 | 1017 | 8230         |
| NOV | 1017  | 1016 | 1016  | 1017 | 1018  | 1015 | 1016  | 1017 | 1017 | 8231         |
| DEC | 1020  | 1019 | 1019  | 1020 | 1020  | 1018 | 1019  | 1019 | 1019 | 8658         |
| ANN | 1018  | 1016 | 1017  | 1018 | 1018  | 1016 | 1017  | 1017 | 1017 | 101934       |
| OBS | 21425 | 1836 | 20827 | 5779 | 22845 | 1890 | 21628 | 5704 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 998  | 1006 | 1011 | 1017 | 1019 | 1022 | 1026 | 1028 | 1033 |
| FEB | 1000 | 1008 | 1011 | 1015 | 1018 | 1021 | 1025 | 1028 | 1034 |
| MAR | 1003 | 1009 | 1012 | 1015 | 1017 | 1020 | 1023 | 1026 | 1033 |
| APR | 1002 | 1009 | 1012 | 1015 | 1017 | 1019 | 1022 | 1025 | 1035 |
| MAY | 1001 | 1010 | 1013 | 1015 | 1017 | 1019 | 1021 | 1023 | 1034 |
| JUN | 1003 | 1012 | 1014 | 1016 | 1017 | 1019 | 1021 | 1023 | 1032 |
| JUL | 1000 | 1008 | 1011 | 1014 | 1016 | 1017 | 1020 | 1022 | 1032 |
| AUG | 1000 | 1008 | 1011 | 1013 | 1015 | 1016 | 1019 | 1020 | 1029 |
| SEP | 1000 | 1009 | 1012 | 1015 | 1016 | 1018 | 1020 | 1022 | 1030 |
| OCT | 1000 | 1010 | 1012 | 1015 | 1017 | 1018 | 1021 | 1023 | 1029 |
| NOV | 1001 | 1008 | 1011 | 1015 | 1017 | 1019 | 1022 | 1024 | 1032 |
| DEC | 998  | 1009 | 1013 | 1017 | 1019 | 1022 | 1025 | 1028 | 1034 |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0006 CAPE BLANC  
20.3N 18.2W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| N        | .1                 | .1        | .1   | .0        | .0   | .0              | *    | .3                      | .0             | .0        | 2.9         | .1                  | 2.2        | .5              | 93.3       |
| NE       | .2                 | .3        | *    | .0        | .0   | .0              | .0   | .4                      | .0             | .0        | 2.1         | *                   | 2.5        | 1.6             | 92.8       |
| E        | .5                 | .6        | .2   | .0        | .0   | .0              | .0   | 1.3                     | .1             | .6        | 3.8         | .0                  | 8.7        | 4.6             | 81.1       |
| SE       | .8                 | .2        | 1.4  | .0        | .0   | .0              | .0   | 2.4                     | .2             | 1.2       | 4.4         | .7                  | 6.3        | 8.5             | 77.3       |
| S        | 5.9                | 1.0       | .6   | .0        | .0   | .0              | .0   | 7.5                     | 1.1            | 8.8       | 4.6         | .5                  | 1.3        | 1.1             | 79.7       |
| SW       | 1.7                | 1.8       | .7   | .0        | .0   | .0              | .0   | 4.1                     | .2             | 3.6       | 3.6         | .2                  | 2.0        | 1.7             | 85.6       |
| W        | .0                 | 2.2       | .9   | .0        | .0   | .0              | .0   | 3.0                     | 3.2            | .0        | 3.2         | .9                  | .9         | 2.8             | 86.0       |
| NW       | .3                 | .5        | .3   | .0        | .0   | .0              | .0   | 1.1                     | .5             | .0        | 2.1         | .5                  | 1.1        | .7              | 94.0       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .3                 | .0        | .6   | .0        | .0   | .0              | .0   | .9                      | .0             | 1.2       | 11.8        | .9                  | 3.1        | 1.2             | 80.7       |
| TOT PCT  | .3                 | .3        | .1   | .0        | .0   | .0              | *    | .8                      | .1             | .8        | 3.1         | .1                  | 3.0        | 1.7             | 90.5       |
| TOT OBS: | 7435               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| 00003      | .2                 | .5        | .2   | .0        | .0   | .0              | .1   | .9                      | .1             | 2.2       | 2.6         | .1                  | 2.4        | 1.8             | 90.1       |
| 06009      | .8                 | .2        | .2   | .0        | .0   | .0              | .0   | 1.2                     | .1             | 1.4       | 3.0         | .1                  | 2.1        | 1.0             | 91.6       |
| 12015      | .3                 | .3        | .2   | .0        | .0   | .0              | .0   | .7                      | .2             | .0        | 2.9         | .2                  | 3.0        | 1.7             | 91.3       |
| 18021      | .3                 | .3        | .1   | .0        | .0   | .0              | .0   | .7                      | .2             | .2        | 3.9         | .2                  | 4.3        | 2.2             | 88.5       |
| TOT PCT    | .4                 | .3        | .1   | .0        | .0   | .0              | *    | .9                      | .1             | .9        | 3.1         | .1                  | 3.0        | 1.7             | 90.4       |
| TOT OBS:   | 7621               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |  |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |  |
| N        | 1.0                | 9.8  | 12.3  | 1.0   | *     | .0 |       | 24.2  | 11.8         | 30.5        | 36.9        | 23.5       | 15.3  | 17.7  | 24.9  | 28.4  | 25.2  |  |
| NE       | .9                 | 15.6 | 29.0  | 4.8   | .2    | .0 |       | 50.5  | 13.7         | 48.7        | 42.3        | 52.5       | 55.7  | 52.2  | 36.6  | 46.6  | 52.5  |  |
| E        | .6                 | 5.3  | 6.5   | 1.2   | *     | .0 |       | 13.7  | 12.5         | 8.5         | 4.9         | 11.8       | 20.8  | 19.1  | 19.3  | 12.1  | 13.4  |  |
| SE       | .2                 | 1.2  | .5    | *     | *     | .0 |       | 2.0   | 8.5          | 1.4         | 1.5         | 1.8        | 1.9   | 2.6   | 5.8   | 1.9   | 2.1   |  |
| S        | .3                 | 1.1  | .2    | .0    | .0    | .0 |       | 1.5   | 6.6          | 1.5         | 1.6         | 1.5        | 1.0   | 1.9   | 2.9   | 1.3   | .9    |  |
| SW       | .3                 | .9   | .2    | *     | *     | .0 |       | 1.5   | 7.7          | 1.7         | 2.1         | 1.5        | 1.1   | 1.3   | .7    | 1.6   | .9    |  |
| W        | .2                 | .8   | .2    | *     | .0    | .0 |       | 1.3   | 7.2          | 1.1         | 2.5         | 1.3        | 1.4   | 1.1   | 2.2   | 1.4   | 1.5   |  |
| NW       | .3                 | 1.5  | .4    | *     | .0    | .0 |       | 2.2   | 7.5          | 2.2         | 1.6         | 1.7        | 1.7   | 1.9   | 3.0   | 3.2   | 2.7   |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 3.1                |      |       |       |       |    |       | 3.1   | .0           | 4.4         | 6.5         | 4.2        | 1.1   | 2.2   | 4.4   | 3.5   | .8    |  |
| TOT OBS  | 908                | 4641 | 6316  | 900   | 31    | 0  | 12796 |       | 12.1         | 2480        | 153         | 2520       | 1159  | 2676  | 181   | 2521  | 1106  |  |
| TOT PCT  | 7.1                | 36.3 | 49.4  | 7.0   | .2    | .0 |       | 100.0 |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 4.4                | 14.9 | 4.8   | .1    | .0  |           | 24.2     | 11.8     | 30.8       | 20.9  | 18.1  | 27.4  |    |
| NE       | 5.4                | 28.2 | 15.7  | 1.1   | *   |           | 50.5     | 13.7     | 48.3       | 53.5  | 51.2  | 48.4  |    |
| E        | 2.5                | 7.3  | 3.6   | .3    | .0  |           | 13.7     | 12.5     | 8.3        | 14.7  | 19.1  | 12.5  |    |
| SE       | .9                 | .9   | .2    | *     | .0  |           | 2.0      | 8.5      | 1.4        | 1.9   | 2.8   | 2.0   |    |
| S        | .9                 | .6   | *     | .0    | .0  |           | 1.5      | 6.6      | 1.5        | 1.4   | 2.0   | 1.2   |    |
| SW       | .8                 | .6   | .1    | *     | *   |           | 1.5      | 7.7      | 1.7        | 1.4   | 1.3   | 1.4   |    |
| W        | .7                 | .5   | .1    | .0    | .0  |           | 1.3      | 7.2      | 1.1        | 1.4   | 1.2   | 1.5   |    |
| NW       | 1.2                | .9   | .1    | .0    | .0  |           | 2.2      | 7.5      | 2.1        | 1.7   | 2.0   | 3.1   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 3.1                |      |       |       |     |           | 3.1      | .0       | 4.6        | 3.2   | 2.3   | 2.6   |    |
| TOT OBS  | 2544               | 6909 | 3142  | 198   | 3   | 12796     |          | 12.1     | 2633       | 3679  | 2857  | 3627  |    |
| TOT PCT  | 19.9               | 54.0 | 24.6  | 1.5   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0006 CAPE BLANC  
20.3N 18.2W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 0000 | 4.6  | 4.5 | 35.9 | 49.2  | 5.8   | .1    | .0  | 11.7  | 100.0    | 2633      |
| 0600 | 3.2  | 3.3 | 34.9 | 49.9  | 8.3   | .4    | .0  | 12.5  | 100.0    | 3679      |
| 1200 | 2.3  | 3.0 | 34.8 | 51.1  | 7.9   | .3    | .0  | 12.6  | 100.0    | 2857      |
| 1800 | 2.6  | 4.5 | 39.1 | 47.6  | 6.0   | .2    | .0  | 11.7  | 100.0    | 3627      |
| TOT  | 401  | 507 | 4661 | 6316  | 900   | 31    | 0   | 12.1  |          | 12796     |
| PCT  | 3.1  | 4.0 | 36.3 | 49.4  | 7.0   | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 23.8 | 3.1  | 3.2  | 1.0        |              | 1.4                    |
| NE       | 31.3 | 5.0  | 6.6  | 2.4        |              | 1.9                    |
| E        | 6.5  | .9   | 1.3  | .5         |              | 1.9                    |
| SE       | 1.0  | .2   | .4   | .2         |              | 3.0                    |
| S        | .6   | .2   | .8   | .4         |              | 4.7                    |
| SW       | .6   | .5   | .5   | .3         |              | 4.0                    |
| W        | .6   | .4   | .3   | .1         |              | 3.3                    |
| NW       | 1.5  | .3   | .5   | .1         |              | 2.4                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | 3.0  | .5   | .9   | .4         |              | 2.3                    |
| TOT OBS  | 4077 | 656  | 868  | 325        | 5926         | 1.9                    |
| TOT PCT  | 68.8 | 11.1 | 14.6 | 5.5        | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .1         | .0         | *          | .1         | .5           | .5           | .3           | .1           | *            | .3    | 29.1               |              |
| NE      | .1         | .0         | *          | .3         | 1.4          | 1.2          | .8           | .3           | .2           | .6    | 40.2               |              |
| E       | .1         | .0         | *          | .1         | .2           | .3           | .2           | *            | .0           | .1    | 8.2                |              |
| SE      | *          | .0         | .0         | .1         | .1           | .1           | *            | .0           | *            | .1    | 1.5                |              |
| S       | *          | .0         | *          | .1         | .2           | .3           | *            | *            | *            | .1    | 1.1                |              |
| SW      | *          | .0         | *          | .1         | .2           | .1           | .0           | *            | *            | .1    | 1.5                |              |
| W       | *          | .0         | .0         | *          | *            | .0           | *            | .0           | .0           | *     | 1.3                |              |
| NW      | .0         | .0         | .0         | *          | *            | *            | .1           | *            | *            | .1    | 2.1                |              |
| VAR     | .2         | *          | *          | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | *          | .3         | .1           | .1           | *            | .2           | .1           | .3    | 3.9                |              |
| TOT OBS | 26         | 2          | 11         | 43         | 174          | 154          | 88           | 28           | 32           | 89    | 5279               | 5926         |
| TOT PCT | .4         | *          | .2         | .7         | 2.9          | 2.6          | 1.5          | .5           | .5           | 1.5   | 89.1               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING<br>(FEET) | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | VSBY (NH)<br>= OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
|-------------------|-------------|------------|------------|-------------------------|--------------|--------------|---------------|------------|
| = OR >6500        | 1.7         | 1.9        | 2.0        | 2.1                     | 2.1          | 2.1          | 2.1           | 2.1        |
| = OR >5000        | 2.1         | 2.3        | 2.5        | 2.5                     | 2.5          | 2.5          | 2.5           | 2.5        |
| = OR >3500        | 3.3         | 3.8        | 3.9        | 4.0                     | 4.0          | 4.0          | 4.0           | 4.0        |
| = OR >2000        | 5.3         | 6.3        | 6.5        | 6.6                     | 6.6          | 6.6          | 6.6           | 6.6        |
| = OR >1000        | 7.6         | 9.1        | 9.5        | 9.6                     | 9.6          | 9.6          | 9.6           | 9.6        |
| = OR >600         | 8.1         | 9.8        | 10.2       | 10.3                    | 10.3         | 10.3         | 10.3          | 10.3       |
| = OR >300         | 8.2         | 9.9        | 10.4       | 10.5                    | 10.5         | 10.5         | 10.5          | 10.5       |
| = OR >150         | 8.2         | 10.0       | 10.4       | 10.5                    | 10.5         | 10.5         | 10.5          | 10.5       |
| = OR >0           | 8.2         | 10.1       | 10.7       | 10.8                    | 10.8         | 10.8         | 11.0          | 11.0       |
| TOTAL             | 495         | 607        | 643        | 650                     | 652          | 654          | 661           | 664        |

TOTAL NUMBER OF OBS: 6034

PCT FREQ NH <5/8: 89.0

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL<br>OBS |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------|
|  | 63.0 | 9.3 | 7.3 | 4.9 | 3.5 | 2.5 | 3.0 | 2.5 | 3.6 | .4  | 6328         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0006 CAPE BLANC  
20.3N 18.2W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VISBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                   |
|---------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|--|
| <1/2          | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |  |
|               | NO PCP | .1   | *    | *   | *   | *   | *   | .0  | *   | .0  | .1   | .3   |  |
|               | TOT %  | .1   | *    | *   | *   | *   | *   | .0  | *   | .0  | .1   | .3   |  |
| 1/2<1         | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |  |
|               | NO PCP | .4   | .3   | .1  | .0  | *   | *   | *   | *   | .0  | .0   | .9   |  |
|               | TOT %  | .4   | .3   | .1  | .0  | *   | *   | *   | *   | .0  | .0   | .9   |  |
| 1<2           | PCP    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |  |
|               | NO PCP | .3   | .4   | .3  | .1  | *   | .0  | .0  | *   | .0  | *    | 1.2  |  |
|               | TOT %  | .3   | .4   | .3  | .1  | *   | .0  | .0  | *   | .0  | *    | 1.2  |  |
| 2<3           | PCP    | .0   | .0   | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |  |
|               | NO PCP | .5   | 1.1  | 1.0 | .2  | .1  | .1  | *   | *   | .0  | .5   | 3.6  |  |
|               | TOT %  | .5   | 1.1  | 1.0 | .2  | .1  | .1  | *   | *   | .0  | .5   | 3.6  |  |
| 5<10          | PCP    | .1   | .1   | *   | *   | .1  | .1  | *   | *   | .0  | *    | .6   |  |
|               | NO PCP | 4.4  | 8.8  | 2.6 | .6  | .4  | .5  | .6  | .6  | .0  | .8   | 19.0 |  |
|               | TOT %  | 4.4  | 8.9  | 2.7 | .6  | .5  | .5  | .6  | .6  | .0  | .8   | 19.6 |  |
| 10+           | PCP    | *    | .1   | *   | *   | *   | *   | .0  | .0  | .0  | *    | .2   |  |
|               | NO PCP | 24.4 | 34.8 | 5.4 | 1.0 | 1.4 | 1.4 | 1.0 | 1.8 | .0  | 2.9  | 74.2 |  |
|               | TOT %  | 24.4 | 34.9 | 5.4 | 1.0 | 1.5 | 1.5 | 1.0 | 1.8 | .0  | 2.9  | 74.3 |  |
| TOT OBS       |        |      |      |     |     |     |     |     |     |     |      |      | 7426   |
| TOT PCT       |        |      |      |     |     |     |     |     |     |     |      |      | 30.2 45.7 9.6 2.0 2.1 2.0 1.6 2.5 .0 4.3 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VISBY<br>(NM) | SPO<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                                    |
|---------------|------------|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|---|
| <1/2          | 0-3        | *    | *    | *   | *   | .0  | *   | .0  | .0  | .0  | *    | .1   |   |
|               | 4-10       | .1   | *    | *   | *   | .0  | .0  | .0  | *   | .0  | *    | .2   |   |
|               | 11-21      | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|               | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0   |   |
|               | TOT %      | .1   | .1   | *   | *   | *   | *   | .0  | *   | .0  | *    | .3   |   |
| 1/2<1         | 0-3        | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *    |   |
|               | 4-10       | .2   | .1   | .1  | .0  | *   | *   | *   | .0  | .0  | .0   | .3   |   |
|               | 11-21      | .1   | .1   | *   | .0  | .0  | .0  | .0  | *   | .0  | .0   | .3   |   |
|               | 22+        | *    | *    | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|               | TOT %      | .3   | .3   | .1  | .0  | *   | *   | *   | *   | .0  | .0   | .7   |   |
| 1<2           | 0-3        | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | *    | *    |   |
|               | 4-10       | .1   | .2   | .1  | .1  | *   | .0  | *   | .0  | .0  | .0   | .5   |   |
|               | 11-21      | .1   | .3   | .1  | *   | .0  | .0  | .0  | .0  | .0  | .0   | .5   |   |
|               | 22+        | *    | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1   |   |
|               | TOT %      | .2   | .5   | .3  | .1  | *   | .0  | *   | *   | .0  | *    | 1.2  |   |
| 2<3           | 0-3        | *    | *    | .1  | *   | *   | *   | *   | .0  | .0  | .4   | .5   |   |
|               | 4-10       | .3   | .5   | .4  | .1  | *   | *   | *   | *   | .0  | .0   | 1.4  |   |
|               | 11-21      | .2   | .6   | .5  | .1  | *   | *   | *   | *   | .0  | .0   | 1.4  |   |
|               | 22+        | *    | .2   | .1  | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .3   |   |
|               | TOT %      | .5   | 1.3  | 1.1 | .2  | .1  | .1  | *   | *   | .0  | .4   | 3.7  |   |
| 5<10          | 0-3        | .2   | .2   | .2  | .1  | *   | .1  | .1  | .1  | .0  | .7   | 1.6  |   |
|               | 4-10       | 1.8  | 3.0  | 1.3 | .4  | .3  | .2  | .2  | .4  | .0  | .0   | 7.6  |   |
|               | 11-21      | 1.8  | 4.7  | 1.3 | .1  | *   | .1  | .1  | .1  | .0  | .0   | 8.2  |   |
|               | 22+        | .2   | .9   | .3  | *   | .0  | *   | .0  | *   | .0  | .0   | 1.4  |   |
|               | TOT %      | 4.0  | 8.8  | 3.0 | .6  | .4  | .4  | .4  | .5  | .0  | .7   | 18.8 |   |
| 10+           | 0-3        | .8   | .7   | .4  | .2  | .3  | .2  | .2  | .3  | .0  | 2.6  | 5.7  |   |
|               | 4-10       | 8.4  | 11.4 | 2.9 | .7  | .9  | .8  | .6  | 1.2 | .0  | .0   | 26.9 |   |
|               | 11-21      | 11.8 | 22.4 | 3.3 | .2  | .1  | .2  | .2  | .3  | .0  | .0   | 38.3 |   |
|               | 22+        | .7   | 3.2  | .4  | .0  | .0  | .0  | *   | *   | .0  | .0   | 4.4  |   |
|               | TOT %      | 21.8 | 37.6 | 7.0 | 1.1 | 1.3 | 1.2 | 1.0 | 1.8 | .0  | 2.6  | 75.3 |   |
| TOT OBS       |            |      |      |     |     |     |     |     |     |     |      |      | 9912  |
| TOT PCT       |            |      |      |     |     |     |     |     |     |     |      |      | 27.0 48.6 11.5 1.9 1.8 1.7 1.4 2.3 .0 3.8 100.0 |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0006 CAPE BLANC  
20.3N 18.2W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .4         | .0         | .2         | .5         | 2.0          | 2.6          | 1.1          | .3           | .7           | 1.4   | 9.2   | 90.8                | 1486         |
| 06009         | .6         | .0         | .3         | .8         | 3.2          | 2.6          | 1.2          | .6           | .5           | 1.5   | 11.4  | 88.6                | 1497         |
| 12015         | .5         | .1         | .1         | 1.0        | 3.3          | 2.5          | 1.7          | .4           | .4           | 1.4   | 11.5  | 88.5                | 1672         |
| 18021         | .3         | .0         | .1         | .6         | 2.8          | 2.5          | 1.8          | .5           | .6           | 1.5   | 10.7  | 89.3                | 1582         |
| TOT           | 28         | 2          | 11         | 45         | 178          | 160          | 70           | 29           | 33           | 92    | 668   | 5569                | 6237         |
| PCT           | .4         | *          | .2         | .7         | 2.9          | 2.6          | 1.4          | .5           | .5           | 1.5   | 10.7  | 89.3                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .6    | .7  | 4.1 | 17.5 | 76.9 | 2207         |
| 06009         | .4   | .7    | .9  | 3.0 | 21.4 | 73.6 | 2759         |
| 12015         | .4   | .5    | 1.1 | 3.8 | 16.7 | 77.5 | 2395         |
| 18021         | .3   | 1.1   | 1.9 | 4.2 | 19.5 | 73.1 | 2739         |
| TOT           | 33   | 74    | 118 | 378 | 1912 | 7585 | 10100        |
| PCT           | .3   | .7    | 1.2 | 3.7 | 18.9 | 75.1 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><30YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .4            | .7         | 5.0         | 7.8             | 87.2               | 1441         |
| 06009         | .6            | 1.2        | 4.7         | 9.7             | 85.5               | 1437         |
| 12015         | .6            | .9         | 5.3         | 9.5             | 85.3               | 1629         |
| 18021         | .3            | .5         | 5.7         | 9.4             | 84.9               | 1527         |
| TOT           | 28            | 48         | 313         | 550             | 5171               | 6034         |
| PCT           | .5            | .8         | 5.2         | 9.1             | 85.7               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .0     | 1            | *           |
| 75/79  | .0   | .0    | .0    | *     | .2    | .2    | .1    | .0     | 27           | .5          |
| 70/74  | .0   | *     | .2    | 1.4   | 3.4   | 4.7   | 2.7   | 1.3    | 761          | 13.8        |
| 65/69  | .0   | .0    | .7    | 4.0   | 9.2   | 15.8  | 19.3  | 8.3    | 3150         | 57.3        |
| 60/64  | .0   | .0    | .1    | 1.3   | 3.7   | 7.9   | 9.9   | 5.1    | 1551         | 28.2        |
| 55/59  | .0   | .0    | .0    | .0    | .1    | .1    | *     | .1     | 12           | .2          |
| TOTAL  | 0    | 1     | 59    | 371   | 912   | 1581  | 1763  | 815    | 5502         | 100.0       |
| PCT    | .0   | *     | 1.1   | 6.7   | 16.6  | 28.7  | 32.0  | 14.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|------|-----|-----|-----|-----|-----|-----|------|
| *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| .1   | .2   | .1   | *   | .0  | *   | *   | *   | .0  | *    |
| 3.7  | 5.4  | 2.1  | .6  | .4  | .3  | .3  | .5  | .0  | .4   |
| 17.0 | 25.6 | 6.1  | 1.1 | 1.4 | 1.5 | 1.0 | 1.6 | .0  | 1.9  |
| 9.1  | 15.6 | 1.8  | .3  | .2  | .3  | .3  | .3  | .0  | .4   |
| *    | .2   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 30.0 | 46.9 | 10.1 | 2.1 | 1.9 | 2.2 | 1.5 | 2.4 | .0  | 2.8  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 82  | 73  | 70  | 66  | 62 | 60 | 54  | 65.8 | 2669         |
| 06009         | 79  | 72  | 70  | 66  | 61 | 59 | 54  | 65.6 | 3692         |
| 12015         | 83  | 78  | 74  | 68  | 63 | 60 | 55  | 68.0 | 2811         |
| 18021         | 84  | 77  | 73  | 67  | 63 | 61 | 55  | 67.6 | 3584         |
| TOT           | 84  | 76  | 72  | 66  | 62 | 60 | 54  | 66.8 | 12756        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 2.9   | 9.5   | 26.5  | 40.9  | 20.3   | 81   | 1333         |
| 06009         | .0   | 6.8   | 13.5  | 23.4  | 36.2  | 20.1   | 79   | 1434         |
| 12015         | .0   | 14.4  | 23.1  | 20.2  | 23.0  | 9.2    | 73   | 1430         |
| 18021         | .0   | 6.6   | 18.7  | 33.6  | 29.6  | 11.4   | 76   | 1442         |
| TOT           | 0    | 437   | 921   | 1606  | 1820  | 855    | 77   | 5639         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT  | W<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 2    | .0       | *         |
| 14/16              | .0       | .0       | .0       | *        | .0       | *        | .1       | *        | 12   | .0       | .2        |
| 11/13              | .0       | .0       | *        | .1       | .0       | .3       | .2       | *        | 42   | .1       | .5        |
| 9/10               | .0       | .0       | *        | *        | .2       | .4       | .2       | *        | 58   | .1       | .8        |
| 7/8                | .0       | .0       | *        | .2       | .7       | .5       | .1       | .0       | 98   | .1       | 1.3       |
| 6                  | .0       | .0       | .1       | .2       | .5       | .2       | .0       | .0       | 62   | *        | .9        |
| 5                  | .0       | .0       | .1       | .8       | 1.1      | .4       | *        | .0       | 166  | .1       | 2.4       |
| 4                  | .0       | .0       | .3       | 1.7      | 1.8      | .5       | .0       | .0       | 290  | .2       | 4.1       |
| 3                  | .0       | *        | .5       | 3.6      | 2.3      | .2       | .0       | .0       | 453  | .2       | 6.5       |
| 2                  | .0       | .0       | 1.6      | 5.7      | 2.8      | .5       | *        | .0       | 717  | .5       | 10.1      |
| 1                  | .0       | .1       | 3.7      | 7.9      | 3.2      | .3       | *        | .0       | 1029 | .5       | 14.7      |
| 0                  | .0       | .2       | 5.8      | 9.8      | 2.5      | .2       | .0       | .0       | 1249 | .7       | 17.7      |
| -1                 | *        | .2       | 5.6      | 7.2      | 1.8      | .2       | *        | .0       | 1015 | .4       | 14.5      |
| -2                 | .0       | .3       | 3.6      | 4.7      | 1.1      | .1       | *        | *        | 659  | .3       | 9.4       |
| -3                 | .0       | .2       | 2.0      | 2.7      | .4       | .0       | .0       | .0       | 358  | .1       | 5.2       |
| -4                 | *        | .3       | 1.8      | 1.4      | .2       | .0       | .0       | .0       | 257  | .1       | 3.7       |
| -5                 | *        | .4       | 1.2      | .8       | .1       | .0       | .0       | .0       | 175  | *        | 2.6       |
| -6                 | .0       | .1       | .4       | .4       | .1       | .0       | .0       | .0       | 62   | *        | .9        |
| -7/-8              | .1       | .1       | .4       | .3       | .1       | .0       | .0       | .0       | 59   | *        | .8        |
| -9/-10             | *        | *        | .1       | .1       | *        | .0       | .0       | .0       | 16   | .0       | .2        |
| -11/-13            | *        | *        | *        | *        | .0       | .0       | .0       | .0       | 8    | .0       | .1        |
| -14/-16            | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1    | .0       | *         |
| TOTAL              | 14       | 125      | 1838     | 3223     | 1281     | 251      | 16       | 6788     | 229  | 6559     |           |
| PCT                | .2       | 1.8      | 27.1     | 47.5     | 18.9     | 3.7      | .6       | 100.0    | 3.4  | 96.6     |           |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE  |      |       |       |       |     |      | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|------|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     |
| <1      | .8  | 2.0  | .2    | .0    | .0    | .0  | 3.1  |     | .4  | 1.8  | .2    | .0    | .0    | .0  | 2.3  |     |
| 1-2     | .5  | 6.1  | 3.2   | .0    | .0    | .0  | 9.8  |     | .4  | 7.4  | 4.4   | .0    | .0    | .0  | 12.1 |     |
| 3-4     | .1  | 3.2  | 6.2   | .1    | .0    | .0  | 9.6  |     | *   | 3.7  | 9.2   | .4    | .0    | .0  | 13.4 |     |
| 5-6     | *   | .8   | 5.3   | .2    | .0    | .0  | 6.4  |     | *   | .9   | 6.8   | .8    | *     | .0  | 8.5  |     |
| 7       | .0  | .1   | 2.1   | .4    | .0    | .0  | 2.6  |     | .0  | .2   | 2.8   | .8    | .0    | .0  | 3.8  |     |
| 8-9     | .0  | *    | .3    | .2    | .0    | .0  | .5   |     | .0  | *    | .5    | .4    | *     | .0  | .9   |     |
| 10-11   | .0  | *    | .3    | .1    | .0    | .0  | .4   |     | .0  | *    | .2    | .3    | .0    | .0  | .4   |     |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | .0   |     | .0  | .0   | *     | *     | .0    | .0  | .1   |     |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *    |     | .0  | .0   | .0    | .1    | .0    | .0  | .1   |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0   |     |
| TOT PCT | 1.4 | 12.3 | 17.6  | 1.1   | .0    | .0  | 32.4 |     | .8  | 14.0 | 24.1  | 2.8   | *     | .0  | 41.7 |     |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     |
| <1      | .4  | .6   | .1    | .0    | .0    | .0  | 1.1 |     | .2  | .2   | *     | .0    | .0    | .0  | .5  |     |
| 1-2     | .1  | 2.1  | 1.0   | .0    | .0    | .0  | 3.2 |     | .1  | .6   | .2    | .0    | .0    | .0  | .9  |     |
| 3-4     | .0  | 1.3  | 1.4   | *     | .0    | .0  | 2.7 |     | *   | .3   | .1    | .0    | .0    | .0  | .4  |     |
| 5-6     | .0  | .3   | 1.1   | *     | .0    | .0  | 1.4 |     | .0  | .1   | .2    | .0    | .0    | .0  | .3  |     |
| 7       | .0  | .0   | .4    | .1    | .0    | .0  | .6  |     | .0  | .0   | *     | .0    | .0    | .0  | *   |     |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 10-11   | .0  | .0   | *     | .0    | *     | .0  | *   |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| TOT PCT | .5  | 4.2  | 4.1   | .3    | *     | .0  | 9.2 |     | .3  | 1.2  | .5    | .0    | .0    | .0  | 2.1 |     |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .4   | .1    | .0    | .0    | .0  | .6  | .1  | .4   | .0    | .0    | .0    | .0  | .6  |
| 1-2     | .1  | .8   | .1    | .0    | .0    | .0  | .9  | .2  | .8   | .1    | .0    | .0    | .0  | 1.1 |
| 3-4     | .0  | .3   | .1    | .0    | .0    | .0  | .4  | .0  | .2   | .1    | .0    | .0    | .0  | .4  |
| 5-6     | .0  | .1   | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 1.5  | .3    | .0    | .0    | .0  | 2.0 | .3  | 1.6  | .2    | .0    | .0    | .0  | 2.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .3  | .5   | .0    | .0    | .0    | .0  | .8  |           |
| 1-2     | .1  | .5   | .1    | .0    | .0    | .0  | .7  | .1  | .8   | .2    | .0    | .0    | .0  | 1.1 |           |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .1  | .0  | .3   | .1    | .0    | .0    | .0  | .4  |           |
| 5-6     | .0  | .1   | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .1  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | .9   | .2    | .0    | .0    | .0  | 1.4 | .5  | 1.6  | .5    | .0    | .0    | .0  | 2.5 | 93.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 9.7  | 6.1  | .5    | .0    | .0    | .0  | 16.3  |         |
| 1-2     | 1.8  | 19.1 | 9.1   | .0    | .0    | .0  | 30.0  |         |
| 3-4     | .1   | 9.3  | 17.0  | .6    | .0    | .0  | 27.1  |         |
| 5-6     | .1   | 2.2  | 13.5  | 1.0   | .0    | .0  | 16.8  |         |
| 7       | .1   | .3   | 5.3   | 1.4   | .0    | .0  | 7.0   |         |
| 8-9     | .0   | .1   | 1.0   | .6    | .0    | .0  | 1.7   |         |
| 10-11   | .0   | .1   | .5    | .4    | .0    | .0  | .9    |         |
| 12      | .0   | .0   | .1    | .1    | .0    | .0  | .1    |         |
| 13-16   | .0   | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 11.6 | 37.1 | 47.1  | 4.2   | .1    | .0  | 100.0 | 4047    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 1.9 | 9.5  | 11.1 | 6.1  | 2.7  | .6  | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1611  | 3        |
| 6-7          | .1  | 1.8  | 5.3  | 6.4  | 4.2  | 1.8 | .8    | .2  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1022  | 5        |
| 8-9          | .0  | .6   | 1.8  | 3.1  | 2.9  | 2.1 | 1.0   | .2  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 602   | 6        |
| 10-11        | .0  | .7   | .8   | 1.2  | 1.0  | .8  | .8    | .1  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 280   | 6        |
| 12-13        | .0  | .0   | .8   | .5   | .5   | .8  | .4    | .2  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 180   | 8        |
| >13          | .0  | .0   | .0   | .6   | .5   | .2  | .4    | .3  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 111   | 8        |
| INDET        | 5.7 | 4.6  | 5.7  | 2.9  | 2.7  | 1.0 | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1151  | 3        |
| TOTAL        | 379 | 854  | 1265 | 1029 | 718  | 358 | 212   | 56  | 61    | 17    | 7     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4957  | 5        |
| PCT          | 7.6 | 17.2 | 25.5 | 20.8 | 14.5 | 7.2 | 4.3   | 1.1 | 1.2   | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FGG WQ PCPN | FGG WQ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |  |
| N                  | .*   | .1        | .1   | .0        | .0   | .0              | .0   | .2              | .1             | .5                      | 2.0         | .1                  | 3.1        | 1.0             | 93.0       |  |
| NE                 | .3   | .*        | .*   | .0        | .0   | .0              | .0   | .3              | .1             | .8                      | 1.7         | .0                  | 3.2        | 1.1             | 92.9       |  |
| E                  | .9   | .5        | .0   | .0        | .0   | .0              | .0   | 1.4             | .2             | .9                      | 3.9         | .2                  | 5.9        | .9              | 86.6       |  |
| SE                 | 6.1  | .0        | 3.5  | .0        | .0   | .0              | .0   | 9.6             | 6.1            | .0                      | .0          | .4                  | 2.2        | .4              | 81.2       |  |
| S                  | 3.0  | .0        | 1.0  | .0        | .0   | .0              | .0   | 4.0             | 2.3            | 6.0                     | 2.7         | .0                  | 1.0        | 2.3             | 83.6       |  |
| SW                 | 3.3  | .9        | 1.1  | .0        | .0   | .0              | .0   | 5.3             | 2.7            | .4                      | 6.7         | .9                  | 1.1        | .0              | 83.4       |  |
| W                  | .8   | .0        | .0   | .0        | .0   | .0              | .0   | .8              | .0             | .0                      | 5.4         | .0                  | 1.2        | 1.3             | 91.2       |  |
| NW                 | .1   | .0        | .3   | .0        | .0   | .0              | .0   | .4              | .2             | .9                      | 5.2         | .1                  | 3.5        | .4              | 89.2       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .4   | .0        | .0   | .0              | .0   | .4              | .4             | .4                      | 5.9         | .4                  | 3.7        | 1.1             | 87.9       |  |
| TOT PCT            | .3   | .1        | .1   | .0        | .0   | .0              | .0   | .5              | .2             | .7                      | 2.4         | .1                  | 3.2        | 1.0             | 91.9       |  |
| TOT OBS:           | 7385 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                       |              |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|-----------------------|--------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FGG WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .2                 | .1           | .2   | .0           | .0   | .0                    | .0   | .5                      | .2                | 1.1          | 1.8            | .0                        | 2.5           | 1.2                   | 92.8         |                  |
| 06009         | .5                 | .2           | .2   | .0           | .0   | .0                    | .0   | .8                      | .3                | 1.2          | 2.6            | .1                        | 1.7           | .8                    | 92.5         |                  |
| 12015         | .3                 | .1           | .1   | .0           | .0   | .0                    | .0   | .4                      | .3                | .1           | 2.3            | .2                        | 3.8           | .9                    | 92.1         |                  |
| 18021         | .4                 | .1           | .2   | .0           | .0   | .0                    | .0   | .6                      | .2                | .5           | 3.1            | .2                        | 4.9           | 1.4                   | 89.3         |                  |
| TOT PCT       | .3                 | .1           | .1   | .0           | .0   | .0                    | .0   | .6                      | .2                | .7           | 2.5            | .1                        | 3.2           | 1.1                   | 91.6         |                  |
| TOT OBS:      | 7577               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                       |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |       |
| N        | 1.3                | 13.7 | 19.3  | 2.5   | *     | *  |       | 36.9  | 12.6         |             | 42.8        | 48.9       | 35.9  | 26.8  | 30.9  | 50.0  | 41.5  | 36.4  |
| NE       | .8                 | 13.0 | 25.0  | 5.5   | .1    | .0 |       | 44.4  | 14.2         |             | 39.5        | 30.6       | 45.1  | 53.7  | 48.5  | 34.2  | 39.9  | 47.5  |
| E        | .4                 | 2.3  | 2.6   | .6    | .1    | .0 |       | 5.9   | 12.5         |             | 3.8         | 2.8        | 5.3   | 9.5   | 8.2   | 4.6   | 4.8   | 5.4   |
| SE       | .2                 | .3   | .2    | *     | .0    | .0 |       | .7    | 8.8          |             | .5          | 2.0        | .8    | .5    | 1.1   | .8    | .6    | .4    |
| S        | .2                 | .5   | .1    | *     | .0    | .0 |       | .8    | 7.5          |             | .8          | .5         | .7    | .4    | 1.0   | .5    | .9    | .7    |
| SW       | .3                 | .9   | .1    | .1    | .0    | .0 |       | 1.4   | 7.1          |             | 1.5         | 1.6        | 1.6   | 1.4   | 1.2   | 1.5   | 1.3   | .9    |
| W        | .4                 | 1.2  | .3    | *     | .0    | .0 |       | 2.0   | 7.1          |             | 2.2         | 2.0        | 2.1   | 1.7   | 1.8   | 2.6   | 1.6   | 2.4   |
| NW       | .7                 | 3.1  | 1.4   | .1    | .0    | .0 |       | 5.4   | 8.8          |             | 5.7         | 5.3        | 5.0   | 4.8   | 4.7   | 4.1   | 6.8   | 4.9   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0    | .0           |             | .0          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.6                |      |       |       |       |    |       | 2.6   | .0           |             | 3.1         | 6.3        | 3.5   | 1.2   | 2.4   | 1.6   | 2.5   | 1.4   |
| TOT OBS  | 936                | 4860 | 6796  | 1236  | 32    | 1  | 13861 |       | 12.5         |             | 2683        | 160        | 2706  | 1287  | 2821  | 184   | 2753  | 1267  |
| TOT PCT  | 6.8                | 35.1 | 49.0  | 8.9   | .2    | *  |       | 100.0 |              |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | +1+ | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |          |
|----------|--------------------|------|-------|-------|-----|--------------|-------------|-------------|------------|----------|----------|----------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |              |             |             | 00<br>03   | 06<br>09 | 12<br>15 | 18<br>21 |
| N        | 5.9                | 21.2 | 9.3   | .4    | *   | 36.9         | 12.6        | 43.2        | 33.0       | 32.1     | 39.9     |          |
| NE       | 4.5                | 23.0 | 15.6  | 1.2   | *   | 44.4         | 14.2        | 39.0        | 47.9       | 47.6     | 42.3     |          |
| E        | 1.2                | 3.0  | 1.4   | .2    | *   | 5.9          | 12.5        | 3.8         | 6.6        | 8.0      | 5.0      |          |
| SE       | .4                 | .2   | .1    | *     | .0  | .7           | 8.8         | .6          | .7         | 1.1      | .5       |          |
| S        | .4                 | .3   | .1    | *     | .0  | .8           | 7.5         | .8          | .6         | 1.0      | .9       |          |
| SW       | .9                 | .4   | .1    | .0    | .0  | 1.4          | 7.1         | 1.5         | 1.6        | 1.3      | 1.2      |          |
| W        | 1.1                | .8   | .1    | .0    | .0  | 2.0          | 7.1         | 2.2         | 2.0        | 1.8      | 1.8      |          |
| NW       | 2.2                | 2.7  | .5    | *     | .0  | 5.4          | 8.8         | 5.6         | 4.9        | 4.7      | 6.2      |          |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0           | .0          | .0          | .0         | .0       | .0       |          |
| CALM     | 2.6                |      |       |       |     | 2.6          | .0          | 3.2         | 2.8        | 2.4      | 2.2      |          |
| TOT OBS  | 2647               | 7165 | 3790  | 257   | 2   | 13861        | 12.5        | 2843        | 3993       | 3005     | 4020     |          |
| TOT PCT  | 19.1               | 51.7 | 27.3  | 1.9   | *   |              | 100.0       | 100.0       | 100.0      | 100.0    | 100.0    |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

# FEBRUARY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 3.2  | 4.2 | 34.5 | 49.6               | 8.2   | .1    | *   | 12.3  | 100.0    | 2843      |
| 06009 | 2.8  | 4.2 | 33.2 | 49.8               | 9.7   | .3    | .0  | 12.7  | 100.0    | 3993      |
| 12015 | 2.4  | 4.1 | 35.4 | 48.5               | 9.4   | .3    | .0  | 12.6  | 100.0    | 3005      |
| 18021 | 2.2  | 4.1 | 37.0 | 48.3               | 8.3   | .1    | .0  | 12.3  | 100.0    | 4020      |
| TOT   | 360  | 576 | 4860 | 6796               | 1236  | 32    | 1   | 12.5  |          | 13861     |
| PCT   | 2.6  | 4.2 | 35.1 | 49.0               | 8.9   | .2    | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 34.2 | 4.1  | 4.7  | 2.5          |              | 1.6                    |
| NE       | 25.3 | 3.8  | 4.0  | 2.0          |              | 1.8                    |
| E        | 2.3  | .5   | .6   | .3           |              | 2.4                    |
| SE       | .3   | *    | .2   | .3           |              | 4.4                    |
| S        | .6   | .1   | .2   | .1           |              | 2.7                    |
| SW       | 1.0  | .1   | .2   | .2           |              | 2.2                    |
| W        | 1.2  | .4   | .2   | .1           |              | 2.1                    |
| NW       | 4.3  | .8   | .6   | .5           |              | 2.0                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 2.6  | .3   | .7   | .5           |              | 2.5                    |
| TOT OBS  | 4325 | 610  | 687  | 385          | 6007         | 1.8                    |
| TOT PCT  | 72.0 | 10.2 | 11.4 | 6.4          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH   | <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|------|------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY  | HGT  | OBS   |
| .2  | *   | .1  | .4  | 1.0  | .7   | .5   | .1   | .2   | .5    | 41.8 |      |       |
| .1  | .0  | *   | .4  | 1.0  | .8   | .5   | .1   | .2   | .3    | 31.7 |      |       |
| .0  | .0  | *   | *   | .1   | .1   | .2   | .1   | .0   | .1    | 3.3  |      |       |
| *   | .0  | *   | .1  | *    | .1   | .1   | *    | *    | *     | .5   |      |       |
| .0  | *   | *   | *   | *    | *    | *    | *    | .0   | *     | .8   |      |       |
| .0  | *   | *   | *   | .1   | *    | *    | *    | .0   | *     | 1.3  |      |       |
| .0  | .0  | *   | *   | .1   | *    | *    | .0   | *    | *     | 1.7  |      |       |
| .1  | .0  | .0  | *   | .1   | .1   | .1   | .1   | .1   | .1    | 5.4  |      |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0   |      |       |
| .1  | *   | .0  | .1  | .1   | *    | *    | .1   | .1   | .1    | 3.4  |      |       |
| 29  | 4   | 9   | 61  | 149  | 118  | 90   | 27   | 36   | 75    | 5409 |      | 6007  |
| .5  | .1  | .1  | 1.0 | 2.5  | 2.0  | 1.5  | .4   | .6   | 1.2   | 90.0 |      | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | VSBY (NM)  |              |              |               | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|--------------|---------------|------------|
|                   |             |            |            | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD |              |               |            |
| = OR >6500        | 1.1         | 1.7        | 1.9        | 1.9        | 1.9          | 1.9          | 1.9           | 1.9          | 1.9           | 1.9        |
| = OR >5000        | 1.4         | 2.1        | 2.3        | 2.4        | 2.4          | 2.4          | 2.4           | 2.4          | 2.4           | 2.4        |
| = OR >3500        | 2.5         | 3.5        | 3.8        | 3.9        | 3.9          | 3.9          | 3.9           | 3.9          | 3.9           | 3.9        |
| = OR >2000        | 4.1         | 5.4        | 5.8        | 5.8        | 5.9          | 5.9          | 5.9           | 5.9          | 5.9           | 5.9        |
| = OR >1000        | 5.9         | 7.8        | 8.3        | 8.4        | 8.4          | 8.4          | 8.4           | 8.4          | 8.4           | 8.4        |
| = OR >600         | 6.5         | 8.7        | 9.3        | 9.4        | 9.4          | 9.4          | 9.4           | 9.4          | 9.4           | 9.4        |
| = OR >300         | 6.6         | 8.8        | 9.4        | 9.5        | 9.6          | 9.6          | 9.6           | 9.6          | 9.6           | 9.6        |
| = OR >150         | 6.6         | 8.8        | 9.5        | 9.6        | 9.6          | 9.6          | 9.6           | 9.6          | 9.6           | 9.6        |
| = OR >0           | 6.6         | 8.9        | 9.7        | 9.8        | 9.9          | 10.0         | 10.0          | 10.1         | 10.1          | 10.1       |
| TOTAL             | 406         | 546        | 596        | 602        | 605          | 610          | 614           | 614          | 618           | 618        |

TOTAL NUMBER OF OBS: 6122

PCT FREQ NH <5/8: 89.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL<br>OBS |
|------|------|-----|-----|-----|-----|-----|-----|---------|--------------|
| 62.1 | 12.1 | 7.2 | 4.5 | 3.2 | 1.8 | 2.3 | 2.3 | 3.9     | 6377         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | *    | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .1   | .1   | .0  | .0 | .0  | *   | *   | *   | .0  | .1   | .2    |              |
|              | TOT %  | .1   | .1   | .0  | .0 | .0  | *   | *   | *   | .0  | .1   | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .4   | .3   | .1  | .0 | .0  | *   | .1  | .1  | .0  | *    | 1.1   |              |
|              | TOT %  | .4   | .3   | .1  | .0 | .0  | *   | .1  | .1  | .0  | *    | 1.1   |              |
| 1<2          | PCP    | .0   | .0   | .0  | *  | *   | *   | *   | .0  | .0  | .0   | *     |              |
|              | NO PCP | .3   | .5   | .1  | .0 | *   | .0  | .0  | .0  | .0  | *    | .9    |              |
|              | TOT %  | .3   | .5   | .1  | *  | *   | .0  | .0  | .0  | .0  | *    | .9    |              |
| 2<5          | PCP    | *    | .0   | *   | .1 | *   | *   | .0  | *   | .0  | *    | .1    |              |
|              | NO PCP | 1.3  | .7   | .3  | *  | .0  | .1  | .1  | .4  | .0  | .2   | 3.0   |              |
|              | TOT %  | 1.3  | .7   | .3  | .1 | *   | .1  | .1  | .4  | .0  | .2   | 3.1   |              |
| 5<10         | PCP    | .1   | .1   | *   | *  | *   | .1  | *   | *   | .0  | .0   | .3    |              |
|              | NO PCP | 8.4  | 7.9  | 1.0 | .2 | .2  | .3  | .5  | 1.2 | .0  | .6   | 20.4  |              |
|              | TOT %  | 8.5  | 8.0  | 1.1 | .2 | .2  | .4  | .5  | 1.2 | .0  | .6   | 20.6  |              |
| 10+          | PCP    | *    | .1   | *   | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | NO PCP | 34.1 | 26.5 | 2.6 | .5 | .8  | 1.0 | 1.4 | 4.3 | .0  | 2.8  | 73.9  |              |
|              | TOT %  | 34.1 | 26.5 | 2.6 | .5 | .8  | 1.0 | 1.4 | 4.3 | .0  | 2.8  | 74.0  |              |
| TOT OBS      |        |      |      |     |    |     |     |     |     |     |      |       | 7372         |
| TOT PCT      |        |      |      |     |    |     |     |     |     |     |      |       |              |
|              |        | 44.7 | 36.0 | 4.2 | .8 | 1.0 | 1.5 | 2.0 | 6.0 | .0  | 3.7  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | *   | *   | .0  | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0  | .0  | *   | .0  | *    | .1    |              |
|              | 11-21      | *    | *    | .0  | .0 | .0 | .0  | .0  | *   | .0  | *    | *     |              |
|              | 22+        | *    | .0   | .0  | .0 | .0 | .0  | .0  | .0  | .0  | *    | *     |              |
|              | TOT %      | .1   | *    | .0  | .0 | .0 | *   | *   | *   | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | *    | .0   | .0  | .0 | .0 | *   | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | .1   | .1   | *   | .0 | .0 | *   | *   | .1  | .0  | *    | .3    |              |
|              | 11-21      | .2   | .2   | .1  | .0 | .0 | .0  | *   | *   | .0  | *    | .4    |              |
|              | 22+        | *    | *    | *   | .0 | .0 | *   | *   | .0  | .0  | *    | .1    |              |
|              | TOT %      | .3   | .2   | .1  | .0 | .0 | *   | .1  | .1  | .0  | *    | .9    |              |
| 1<2          | 0-3        | *    | *    | *   | *  | .0 | .0  | *   | *   | .0  | *    | .1    |              |
|              | 4-10       | .1   | .2   | *   | .0 | .0 | *   | *   | *   | .0  | *    | .4    |              |
|              | 11-21      | .1   | .2   | *   | .0 | .0 | .0  | .0  | .0  | .0  | *    | .1    |              |
|              | 22+        | *    | *    | .0  | *  | *  | .0  | .0  | .0  | .0  | *    | .1    |              |
|              | TOT %      | .3   | .5   | .1  | *  | *  | *   | *   | *   | .0  | *    | 1.0   |              |
| 2<5          | 0-3        | .1   | *    | *   | .0 | .0 | *   | .0  | *   | .0  | .1   | .3    |              |
|              | 4-10       | .6   | .4   | .1  | *  | .0 | .1  | *   | .1  | .0  | *    | 1.4   |              |
|              | 11-21      | .6   | .4   | .1  | *  | *  | *   | .0  | .2  | .0  | *    | 1.2   |              |
|              | 22+        | .1   | *    | *   | *  | .0 | .0  | .0  | .0  | .0  | *    | .2    |              |
|              | TOT %      | 1.3  | .8   | .2  | .1 | *  | .1  | *   | .4  | .0  | .1   | 3.1   |              |
| 5<10         | 0-3        | .2   | .2   | .1  | *  | *  | .1  | .1  | .1  | .0  | .5   | 1.3   |              |
|              | 4-10       | 2.5  | 1.9  | .5  | *  | .1 | .2  | .3  | .6  | .0  | *    | 6.1   |              |
|              | 11-21      | 3.7  | 4.2  | .5  | .1 | *  | *   | .1  | .3  | .0  | *    | 8.9   |              |
|              | 22+        | .8   | 1.3  | .1  | *  | *  | *   | .0  | *   | .0  | *    | 2.3   |              |
|              | TOT %      | 7.3  | 7.7  | 1.2 | .2 | .2 | .3  | .4  | 1.0 | .0  | .5   | 18.7  |              |
| 10+          | 0-3        | 1.1  | .5   | .3  | .1 | .2 | .2  | .3  | .6  | .0  | 2.4  | 5.7   |              |
|              | 4-10       | 11.9 | 9.6  | 1.4 | .2 | .4 | .8  | .9  | 2.6 | .0  | *    | 27.8  |              |
|              | 11-21      | 16.9 | 17.6 | 1.5 | .1 | .1 | *   | .2  | 1.1 | .0  | *    | 37.5  |              |
|              | 22+        | 1.7  | 3.2  | .2  | *  | .0 | *   | *   | .1  | .0  | *    | 5.2   |              |
|              | TOT %      | 31.5 | 30.8 | 3.5 | .4 | .6 | 1.1 | 1.4 | 4.4 | .0  | 2.4  | 76.2  |              |
| TOT OBS      |            |      |      |     |    |    |     |     |     |     |      |       | 10267        |
| TOT PCT      |            |      |      |     |    |    |     |     |     |     |      |       |              |
|              |            | 40.9 | 40.0 | 5.0 | .7 | .8 | 1.5 | 1.9 | 5.9 | .0  | 3.2  | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

# FEBRUARY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+     | TOTAL      | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|-------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-----------|------------|---------------------|---------------|
| 00003       | .3         | .1         | .1         | .9         | 2.2          | 1.5          | 1.1          | .3           | .5           | .9        | 7.9        | 92.1                | 1487          |
| 06009       | .5         | .1         | .1         | 1.3        | 3.2          | 2.2          | 1.3          | .5           | .3           | 1.2       | 10.6       | 89.4                | 1518          |
| 12015       | .5         | .0         | .2         | 1.1        | 2.3          | 2.9          | 1.9          | .5           | .6           | 1.7       | 11.8       | 88.2                | 1688          |
| 18021       | .5         | .1         | .1         | .6         | 2.3          | 1.1          | 1.5          | .4           | .9           | 1.3       | 8.8        | 91.2                | 1616          |
| TOT<br>PCT  | 29<br>.5   | 4<br>.1    | 9<br>.1    | 62<br>1.0  | 156<br>2.5   | 123<br>1.9   | 92<br>1.5    | 27<br>.4     | 37<br>.6     | 82<br>1.3 | 621<br>9.8 | 5688<br>90.2        | 6309<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HR<br>(GMT) | <1/2     | 1/2<1    | 1<2        | 2<5        | 5<10         | 10+          | TOTAL<br>OBS   |
|-------------|----------|----------|------------|------------|--------------|--------------|----------------|
| 00003       | .1       | .5       | .7         | 3.1        | 18.7         | 76.9         | 2278           |
| 06009       | .2       | 1.1      | .8         | 2.2        | 19.6         | 76.0         | 2838           |
| 12015       | .3       | .8       | 1.0        | 3.8        | 15.7         | 78.4         | 2457           |
| 18021       | .3       | 1.3      | 1.5        | 3.6        | 20.1         | 73.3         | 2892           |
| TOT<br>PCT  | 25<br>.2 | 99<br>.9 | 104<br>1.0 | 331<br>3.2 | 1950<br>18.6 | 7956<br>76.0 | 10465<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS  |
|-------------|--------------|------------|-------------|-----------------|--------------------|---------------|
| 00003       | .3           | .6         | 4.5         | 6.1             | 89.4               | 1438          |
| 06009       | .5           | 1.0        | 4.6         | 8.4             | 87.0               | 1456          |
| 12015       | .5           | .8         | 5.5         | 9.5             | 85.0               | 1646          |
| 18021       | .5           | .9         | 5.7         | 6.8             | 87.5               | 1582          |
| TOT<br>PCT  | 29<br>.5     | 50<br>.8   | 312<br>5.1  | 475<br>7.8      | 5335<br>87.1       | 6122<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | *     | .0    | .1    | *     | .0    | .0    | .0     | 6            | .1          |
| 75/79  | .0   | .0    | .0    | .2    | .3    | .4    | .1    | .1     | 56           | 1.0         |
| 70/74  | .0   | .0    | .1    | 2.7   | 6.0   | 4.5   | .9    | .9     | 852          | 14.7        |
| 65/69  | .0   | .0    | .1    | 1.5   | 5.3   | 16.5  | 23.7  | 9.0    | 3248         | 56.1        |
| 60/64  | .0   | .0    | *     | .2    | 2.3   | 7.4   | 10.9  | 7.0    | 1616         | 27.9        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | .1    | .1     | 12           | .2          |
| TOTAL  | 0    | 1     | 8     | 143   | 622   | 1760  | 2274  | 982    | 5790         | 100.0       |
| PCT    | .0   | *     | .1    | 2.5   | 10.7  | 30.4  | 39.3  | 17.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|----|-----|-----|-----|-----|------|
| 80/84 | *    | *    | *   | .0 | .0 | .0  | .0  | *   | .0  | .0   |
| 75/79 | .4   | .3   | .1  | *  | *  | *   | .0  | .1  | .0  | .1   |
| 70/74 | 6.7  | 4.9  | .9  | .1 | .1 | .2  | .3  | 1.1 | .0  | .4   |
| 65/69 | 26.2 | 19.2 | 2.3 | .4 | .4 | .8  | 1.2 | 3.7 | .0  | 1.9  |
| 60/64 | 11.9 | 12.4 | .8  | .3 | .3 | .3  | .3  | .8  | .0  | .7   |
| 55/59 | .1   | .1   | *   | .0 | .0 | .0  | .0  | .0  | .0  | *    |
| TOTAL | 45.3 | 37.0 | 4.1 | .9 | .9 | 1.2 | 1.8 | 5.7 | .0  | 3.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003       | 82  | 72  | 69  | 65  | 61 | 60 | 50  | 65.2 | 2871         |
| 06009       | 79  | 72  | 69  | 65  | 61 | 59 | 50  | 64.9 | 4011         |
| 12015       | 84  | 77  | 73  | 68  | 63 | 61 | 52  | 68.0 | 2970         |
| 18021       | 86  | 78  | 73  | 67  | 62 | 61 | 50  | 67.4 | 3981         |
| TOT         | 86  | 76  | 72  | 66  | 62 | 60 | 50  | 66.3 | 13893        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|-------------|------|-------|-------|-------|-------|--------|------|--------------|
| 0003        | .0   | .5    | 4.8   | 22.7  | 46.3  | 25.7   | 84   | 1403         |
| 0609        | .0   | 2.1   | 7.4   | 25.5  | 40.0  | 25.0   | 82   | 1509         |
| 1215        | .0   | 5.0   | 18.2  | 35.3  | 32.5  | 9.0    | 76   | 1500         |
| 1821        | .0   | 2.7   | 11.9  | 36.6  | 38.3  | 10.5   | 78   | 1534         |
| TOT         | 0    | 155   | 635   | 1794  | 2327  | 1035   | 80   | 5946         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1853-1973

FEBRUARY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FDG | WD<br>FDG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .0        |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .0        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1       | .0       | 12    | .0       | .2        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .2       | .2       | .1       | .0       | 37    | .0       | .5        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .3       | .6       | .2       | .0       | .0       | 73    | .1       | 1.0       |
| 7/8                | .0       | .0       | .0       | .0       | .1       | .6       | .7       | .1       | .0       | .0       | 102   | .1       | 1.4       |
| 6                  | .0       | .0       | .0       | .0       | .2       | 1.0      | .4       | .0       | .0       | .0       | 107   | .1       | 1.5       |
| 5                  | .0       | .0       | .0       | .0       | .9       | 1.6      | .5       | .0       | .0       | .0       | 211   | .1       | 3.0       |
| 4                  | .0       | .0       | .0       | .3       | 1.7      | 2.2      | .4       | .0       | .0       | .0       | 318   | .2       | 4.5       |
| 3                  | .0       | .0       | .0       | .4       | 3.2      | 2.9      | .5       | .0       | .0       | .0       | 473   | .3       | 6.7       |
| 2                  | .0       | .0       | .0       | 1.4      | 5.9      | 3.0      | .3       | .0       | .0       | .0       | 725   | .3       | 10.4      |
| 1                  | .0       | .0       | .0       | 3.5      | 8.8      | 3.2      | .2       | .0       | .0       | .0       | 1062  | .4       | 15.3      |
| 0                  | .0       | .0       | .1       | 6.4      | 11.0     | 2.7      | .1       | .0       | .0       | .0       | 1386  | .5       | 19.9      |
| -1                 | .0       | .0       | .3       | 5.6      | 7.1      | 1.5      | .0       | .0       | .0       | .0       | 994   | .4       | 14.3      |
| -2                 | .0       | .0       | .2       | 4.2      | 3.8      | .7       | .0       | .0       | .0       | .0       | 603   | .2       | 8.7       |
| -3                 | .0       | .0       | .1       | 2.0      | 2.2      | .4       | .0       | .0       | .0       | .0       | 320   | .0       | 4.7       |
| -4                 | .0       | .0       | .1       | 1.6      | .9       | .1       | .0       | .0       | .0       | .0       | 184   | .1       | 2.7       |
| -5                 | .0       | .0       | .1       | .6       | .4       | .0       | .0       | .0       | .0       | .0       | 79    | .0       | 1.1       |
| -6                 | .0       | .0       | .1       | .3       | .2       | .0       | .0       | .0       | .0       | .0       | 40    | .0       | .6        |
| -7/-8              | .0       | .0       | .1       | .2       | .2       | .1       | .0       | .0       | .0       | .0       | 35    | .0       | .5        |
| -9/-10             | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 8     | .0       | .1        |
| -11/-13            | .0       | .0       | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 13    | .0       | .2        |
| -14/-16            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| TOTAL              | 5        | 6        | 77       | 1811     | 3171     | 1380     | 272      | 47       | 18       | 2        | 6789  | 184      | 6605      |
| PCT                | .1       | .1       | 1.1      | 26.7     | 46.7     | 20.3     | 4.0      | .7       | .3       | .0       | 100.0 | 2.7      | 97.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .9  | 3.5  | .2    | .0    | .0    | .0  | 4.6  | .3  | 1.4  | .0    | .0    | .0    | .0  | 1.8  |
| 1-2     | .4  | 8.7  | 4.6   | .0    | .0    | .0  | 13.7 | .2  | 6.0  | 3.0   | .0    | .0    | .0  | 9.2  |
| 3-4     | .0  | 3.5  | 9.4   | .5    | .0    | .0  | 13.5 | .0  | 1.9  | 6.3   | .3    | .0    | .0  | 8.6  |
| 5-6     | .0  | 1.1  | 7.0   | 1.0   | .0    | .0  | 9.1  | .0  | .6   | 5.6   | .6    | .0    | .0  | 6.8  |
| 7       | .0  | .3   | 3.1   | .9    | .0    | .0  | 4.3  | .0  | .1   | 2.2   | .8    | .0    | .0  | 3.1  |
| 8-9     | .0  | .0   | .9    | .3    | .0    | .0  | 1.3  | .0  | .0   | .6    | .6    | .0    | .0  | 1.2  |
| 10-11   | .0  | .0   | .5    | .2    | .0    | .0  | .8   | .0  | .0   | .3    | .4    | .0    | .0  | .7   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .2   | .0  | .0   | .1    | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .1    | .2    | .0    | .0  | .3   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.3 | 17.2 | 25.9  | 3.1   | .1    | .0  | 47.6 | .6  | 10.2 | 18.1  | 3.0   | .1    | .0  | 31.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .3   | .0    | .0    | .0    | .0  | .4  | .1  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | 1.0  | .4    | .0    | .0    | .0  | 1.5 | .0  | .3   | .0    | .0    | .0    | .0  | .3  |
| 3-4     | .0  | .6   | .7    | .0    | .0    | .0  | 1.2 | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 2.0  | 1.3   | .1    | .0    | .0  | 3.6 | .1  | .4   | .2    | .1    | .0    | .0  | .9  |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .4  | *   | .4   | *     | .0    | .0    | .0  | .4  |           |
| 1-2     | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .1  | .6   | .0    | .0    | .0    | .0  | .7  |           |
| 3-4     | .0  | .1   | *     | .0    | .0    | .0  | .2  | .0  | .2   | .1    | .0    | .0    | .0  | .2  |           |
| 5-6     | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | *    | *     | .0    | .0    | .0  | .1  |           |
| 7       | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | .0    | .0    | .0    | .0  | *   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | .7   | .1    | *     | .0    | .0  | 1.0 | .1  | 1.2  | .1    | *     | .0    | .0  | 1.4 |           |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .3  | .9   | *     | .0    | .0    | .0  | 1.3 |           |
| 1-2     | .1  | .6   | .1    | .0    | .0    | .0  | .8  | .2  | 1.7  | .6    | .0    | .0    | .0  | 2.5 |           |
| 3-4     | *   | .2   | .1    | .0    | .0    | .0  | .3  | .0  | .6   | 1.0   | *     | .0    | .0  | 1.6 |           |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | .1  | *   | .2   | .5    | .1    | .0    | .0  | .8  |           |
| 7       | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | *    | .2    | *     | .0    | .0  | .2  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | *     | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | 1.2  | .2    | .0    | .0    | .0  | 1.7 | .5  | 3.4  | 2.5   | .1    | .0    | .0  | 6.5 | 94.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 8.2 | 7.0  | .3    | .0    | .0    | .0  | 15.5  |         |
| 1-2     | 1.3 | 19.2 | 8.6   | .0    | .0    | .0  | 29.1  |         |
| 3-4     | .1  | 7.1  | 17.4  | .8    | .0    | .0  | 25.5  |         |
| 5-6     | .1  | 2.0  | 13.3  | 1.7   | .0    | .0  | 17.1  |         |
| 7       | .0  | .5   | 5.4   | 1.8   | .1    | .0  | 7.8   |         |
| 8-9     | .0  | .1   | 1.6   | 1.0   | .0    | .0  | 2.6   |         |
| 10-11   | .0  | .0   | .8    | .6    | .1    | .0  | 1.5   |         |
| 12      | .0  | *    | .1    | .2    | *     | .0  | .3    |         |
| 13-16   | .0  | .0   | .2    | .3    | .0    | .0  | .4    |         |
| 17-19   | .0  | .0   | *     | .0    | *     | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 9.7 | 36.0 | 47.7  | 6.4   | .2    | .0  | 100.0 | 3820    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.8 | 8.0  | 9.4  | 5.6  | 3.4  | .8  | .3    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1400  | 4        |
| 6-7          | *   | 1.1  | 4.5  | 6.1  | 3.7  | 1.9 | 1.3   | .5  | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 912   | 6        |
| 8-9          | .0  | 1.0  | 2.5  | 3.1  | 3.3  | 1.8 | 1.3   | .6  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 658   | 6        |
| 10-11        | .0  | .8   | .9   | 1.1  | 1.0  | 1.0 | .7    | .4  | .4    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 296   | 7        |
| 12-13        | .0  | .0   | 1.0  | .8   | .7   | .7  | .3    | .2  | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 189   | 7        |
| >13          | .0  | .0   | .0   | .4   | .6   | .2  | .4    | .1  | .4    | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 107   | 9        |
| INDET        | 4.6 | 4.9  | 5.3  | 4.0  | 2.4  | 1.8 | .9    | .2  | .5    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1173  | 4        |
| TOTAL        | 305 | 748  | 1119 | 1004 | 714  | 390 | 242   | 99  | 95    | 14    | 5     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4735  | 5        |
| PCT          | 6.4 | 15.8 | 23.6 | 21.2 | 15.1 | 8.2 | 5.1   | 2.1 | 2.0   | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1895-1973

MARCH

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20.3N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| N        | .0                 | .1        | .0   | .0        | .0   | .0              | .0   | .1                      | .1             | .4        | 2.5         | .0                  | 4.4        | 1.7             | 90.7       |
| NE       | .0                 | .1        | .0   | .0        | .0   | .0              | .0   | .2                      | .0             | .5        | 1.8         | .0                  | 4.8        | 1.7             | 91.0       |
| E        | 1.8                | .0        | .0   | .0        | .0   | .0              | .0   | 1.8                     | .0             | 2.5       | 3.3         | .0                  | 6.2        | 2.7             | 83.9       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 10.1        | .0                  | 1.8        | .0              | 82.1       |
| S        | .0                 | .0        | 1.8  | .0        | .0   | .0              | .0   | 1.8                     | .0             | 1.8       | .0          | .0                  | 3.1        | .0              | 93.4       |
| SW       | 1.4                | 1.4       | .0   | .0        | .0   | .0              | .0   | 2.7                     | .0             | 1.4       | 1.7         | .0                  | 3.1        | .0              | 91.1       |
| W        | .4                 | .9        | .0   | .0        | .0   | .0              | .0   | 1.3                     | .9             | 2.6       | 6.9         | .9                  | 6.9        | .0              | 81.0       |
| NW       | .3                 | .0        | .4   | .0        | .0   | .0              | .0   | .8                      | .0             | 1.8       | 5.6         | .5                  | 4.8        | 1.1             | 85.7       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 7.8         | .0                  | 3.1        | 3.9             | 85.2       |
| TOT PCT  | .1                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | .6        | 2.6         | .1                  | 4.6        | 1.7             | 90.1       |
| TOT OBS: | 7803               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| 00003      | .1                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | 1.0       | 2.4         | .1                  | 3.9        | 1.7             | 90.6       |
| 06009      | .1                 | .3        | .1   | .0        | .0   | .0              | .0   | .4                      | .1             | 1.3       | 2.8         | .1                  | 3.0        | 1.3             | 91.1       |
| 12015      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .1             | .0        | 2.2         | .1                  | 5.1        | 1.4             | 91.0       |
| 18021      | .1                 | .1        | .0   | .0        | .0   | .0              | .0   | .2                      | .0             | .3        | 3.0         | .1                  | 6.1        | 2.2             | 88.1       |
| TOT PCT    | .1                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | .6        | 2.6         | .1                  | 4.5        | 1.7             | 90.2       |
| TOT OBS:   | 7972               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.1                | 14.2 | 25.9  | 4.2   | .1    | .0  |       | 45.6      | 13.6     |          | 49.6       | 57.0  | 45.8  | 35.8  | 41.4  | 54.6  | 50.5  | 43.1  |
| NE       | .6                 | 9.9  | 23.4  | 6.7   | .2    | .0  |       | 40.7      | 15.1     |          | 35.7       | 30.7  | 41.3  | 50.5  | 45.8  | 36.4  | 35.6  | 42.0  |
| E        | .2                 | 1.2  | 1.2   | .3    | .0    | .0  |       | 2.9       | 12.0     |          | 2.3        | 1.4   | 2.4   | 3.9   | 3.9   | .8    | 2.7   | 2.6   |
| SE       | .0                 | .2   | .0    | .0    | .0    | .0  |       | .3        | 8.2      |          | .2         | .0    | .2    | .6    | .5    | .0    | .4    | .2    |
| S        | .1                 | .3   | .1    | .0    | .0    | .0  |       | .5        | 8.0      |          | .4         | 1.4   | .3    | .3    | .5    | 1.1   | .7    | .5    |
| SW       | .2                 | .6   | .1    | .0    | .0    | .0  |       | .9        | 7.1      |          | .9         | 1.4   | .8    | .9    | .9    | 1.4   | .8    | 1.1   |
| W        | .4                 | 1.2  | .3    | .0    | .0    | .0  |       | 2.0       | 6.6      |          | 2.2        | 2.7   | 1.9   | 2.0   | 1.4   | .0    | 2.0   | 2.9   |
| NW       | .7                 | 3.7  | 1.3   | .0    | .0    | .0  |       | 5.7       | 8.2      |          | 6.6        | 3.4   | 5.7   | 5.1   | 4.5   | 4.7   | 6.3   | 6.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.4                |      |       |       |       |     |       | 1.4       | .0       |          | 2.0        | 1.7   | 1.7   | 1.0   | 1.3   | 1.0   | 1.0   | 1.1   |
| TOT OBS  | 728                | 4843 | 8060  | 1740  | 41    | 2   | 15414 |           | 13.4     |          | 3023       | 174   | 2988  | 1451  | 3118  | 196   | 3028  | 1436  |
| TOT PCT  | 4.7                | 31.4 | 52.3  | 11.3  | .3    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 5.5                | 25.1 | 14.3  | .7    | .0  |           | 45.6     | 13.6     | 50.0       | 42.5  | 42.2  | 48.1  |
| NE       | 3.2                | 19.8 | 16.3  | 1.4   | .0  |           | 40.7     | 15.1     | 35.4       | 44.3  | 45.2  | 37.7  |
| E        | .8                 | 1.3  | .7    | .1    | .0  |           | 2.9      | 12.0     | 2.3        | 2.9   | 3.7   | 2.7   |
| SE       | .2                 | .1   | .0    | .0    | .0  |           | .3       | 8.2      | .2         | .3    | .4    | .4    |
| S        | .2                 | .2   | .0    | .0    | .0  |           | .5       | 8.0      | .5         | .3    | .6    | .7    |
| SW       | .5                 | .4   | .0    | .0    | .0  |           | .9       | 7.1      | 1.0        | .8    | .9    | .9    |
| W        | 1.2                | .7   | .1    | .0    | .0  |           | 2.0      | 6.6      | 2.2        | 1.9   | 1.3   | 2.3   |
| NW       | 2.4                | 2.9  | .4    | .0    | .0  |           | 5.7      | 8.2      | 6.4        | 5.5   | 4.5   | 6.3   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 1.4                |      |       |       |     |           | 1.4      | .0       | 2.0        | 1.5   | 1.2   | 1.0   |
| TOT OBS  | 2374               | 7781 | 4911  | 342   | 6   | 15414     |          | 13.4     | 3197       | 4439  | 3314  | 4464  |
| TOT PCT  | 15.4               | 50.5 | 31.9  | 2.2   | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND SPEED (KNOTS) | 000 | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 | 016 | 017 | 018 | 019 | 020 | 021 | 022 | 023 | 024 | 025 | 026 | 027 | 028 | 029 | 030 | 031 | 032 | 033 | 034 | 035 | 036 | 037 | 038 | 039 | 040 | 041 | 042 | 043 | 044 | 045 | 046 | 047 | 048 | 049 | 050 | 051 | 052 | 053 | 054 | 055 | 056 | 057 | 058 | 059 | 060 | 061 | 062 | 063 | 064 | 065 | 066 | 067 | 068 | 069 | 070 | 071 | 072 | 073 | 074 | 075 | 076 | 077 | 078 | 079 | 080 | 081 | 082 | 083 | 084 | 085 | 086 | 087 | 088 | 089 | 090 | 091 | 092 | 093 | 094 | 095 | 096 | 097 | 098 | 099 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 | 1001 | 1002 | 1003 | 1004 | 1005 | 1006 | 1007 | 1008 | 1009 | 1010 | 1011 | 1012 | 1013 | 1014 | 1015 | 1016 | 1017 | 1018 | 1019 | 1020 | 1021 | 1022 | 1023 | 1024 | 1025 | 1026 | 1027 | 1028 | 1029 | 1030 | 1031 | 1032 | 1033 | 1034 | 1035 | 1036 | 1037 | 1038 | 1039 | 1040 | 1041 | 1042 | 1043 | 1044 | 1045 | 1046 | 1047 | 1048 | 1049 | 1050 | 1051 | 1052 | 1053 | 1054 | 1055 | 1056 | 1057 | 1058 | 1059 | 1060 | 1061 | 1062 | 1063 | 1064 | 1065 | 1066 | 1067 | 1068 | 1069 | 1070 | 1071 | 1072 | 1073 | 1074 | 1075 | 1076 | 1077 | 1078 | 1079 | 1080 | 1081 | 1082 | 1083 | 1084 | 1085 | 1086 | 1087 | 1088 | 1089 | 1090 | 1091 | 1092 | 1093 | 1094 | 1095 | 1096 | 1097 | 1098 | 1099 | 1100 | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1107 | 1108 | 1109 | 1110 | 1111 | 1112 | 1113 | 1114 | 1115 | 1116 | 1117 | 1118 | 1119 | 1120 | 1121 | 1122 | 1123 | 1124 | 1125 | 1126 | 1127 | 1128 | 1129 | 1130 | 1131 | 1132 | 1133 | 1134 | 1135 | 1136 | 1137 | 1138 | 1139 | 1140 | 1141 | 1142 | 1143 | 1144 | 1145 | 1146 | 1147 | 1148 | 1149 | 1150 | 1151 | 1152 | 1153 | 1154 | 1155 | 1156 | 1157 | 1158 | 1159 | 1160 | 1161 | 1162 | 1163 | 1164 | 1165 | 1166 | 1167 | 1168 | 1169 | 1170 | 1171 | 1172 | 1173 | 1174 | 1175 | 1176 | 1177 | 1178 | 1179 | 1180 | 1181 | 1182 | 1183 | 1184 | 1185 | 1186 | 1187 | 1188 | 1189 | 1190 | 1191 | 1192 | 1193 | 1194 | 1195 | 1196 | 1197 | 1198 | 1199 | 1200 | 1201 | 1202 | 1203 | 1204 | 1205 | 1206 | 1207 | 1208 | 1209 | 1210 | 1211 | 1212 | 1213 | 1214 | 1215 | 1216 | 1217 | 1218 | 1219 | 1220 | 1221 | 1222 | 1223 | 1224 | 1225 | 1226 | 1227 | 1228 | 1229 | 1230 | 1231 | 1232 | 1233 | 1234 | 1235 | 1236 | 1237 | 1238 | 1239 | 1240 | 1241 | 1242 | 1243 | 1244 | 1245 | 1246 | 1247 | 1248 | 1249 | 1250 | 1251 | 1252 | 1253 | 1254 | 1255 | 1256 | 1257 | 1258 | 1259 | 1260 | 1261 | 1262 | 1263 | 1264 | 1265 | 1266 | 1267 | 1268 | 1269 | 1270 | 1271 | 1272 | 1273 | 1274 | 1275 | 1276 | 1277 | 1278 | 1279 | 1280 | 1281 | 1282 | 1283 | 1284 | 1285 | 1286 | 1287 | 1288 | 1289 | 1290 | 1291 | 1292 | 1293 | 1294 | 1295 | 1296 | 1297 | 1298 | 1299 | 1300 | 1301 | 1302 | 1303 | 1304 | 1305 | 1306 | 1307 | 1308 | 1309 | 1310 | 1311 | 1312 | 1313 | 1314 | 1315 | 1316 | 1317 | 1318 | 1319 | 1320 | 1321 | 1322 | 1323 | 1324 | 1325 | 1326 | 1327 | 1328 | 1329 | 1330 | 1331 | 1332 | 1333 | 1334 | 1335 | 1336 | 1337 | 1338 | 1339 | 1340 | 1341 | 1342 | 1343 | 1344 | 1345 | 1346 | 1347 | 1348 | 1349 | 1350 | 1351 | 1352 | 1353 | 1354 | 1355 | 1356 | 1357 | 1358 | 1359 | 1360 | 1361 | 1362 | 1363 | 1364 | 1365 | 1366 | 1367 | 1368 | 1369 | 1370 | 1371 | 1372 | 1373 | 1374 | 1375 | 1376 | 1377 | 1378 | 1379 | 1380 | 1381 | 1382 | 1383 | 1384 | 1385 | 1386 | 1387 | 1388 | 1389 | 1390 | 1391 | 1392 | 1393 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 | 1400 | 1401 | 1402 | 1403 | 1404 | 1405 | 1406 | 1407 | 1408 | 1409 | 1410 | 1411 | 1412 | 1413 | 1414 | 1415 | 1416 | 1417 | 1418 | 1419 | 1420 | 1421 | 1422 | 1423 | 1424 | 1425 | 1426 | 1427 | 1428 | 1429 | 1430 | 1431 | 1432 | 1433 | 1434 | 1435 | 1436 | 1437 | 1438 | 1439 | 1440 | 1441 | 1442 | 1443 | 1444 | 1445 | 1446 | 1447 | 1448 | 1449 | 1450 | 1451 | 1452 | 14 |
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PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM  | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|------|------|-----|-------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0    | .0    |              |
|              | NO PCP | * .0 | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | .1  | .1    |       |              |
|              | TOT %  | * .0 | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | .1  | .1    |       |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | .0  | .0    | *     |              |
|              | NO PCP | .6   | .3   | * .0 | * .0 | .0   | .0   | * .1 | * .0 | .0  | * 1.1 |       |              |
|              | TOT %  | .6   | .3   | * .0 | * .0 | .0   | .0   | .1   | .2   | .0  | * 1.1 |       |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0    | .0    |              |
|              | NO PCP | .4   | .4   | * .0 | .0   | .0   | * .1 | .1   | .1   | .0  | .1    | 1.1   |              |
|              | TOT %  | .4   | .4   | * .0 | .0   | .0   | * .1 | .1   | .1   | .0  | .1    | 1.1   |              |
| 2<5          | PCP    | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .0  | .0    | *     |              |
|              | NO PCP | 1.7  | 1.0  | .1   | * .0 | * .1 | * .3 | .0   | .1   | .3  | .1    | 3.4   |              |
|              | TOT %  | 1.7  | 1.0  | .2   | * .0 | * .1 | * .3 | .0   | .1   | .3  | .1    | 3.4   |              |
| 5<10         | PCP    | * .0 | * .0 | * .0 | .0   | .0   | * .0 | * .0 | * .0 | .0  | .0    | .2    |              |
|              | NO PCP | 12.6 | 7.6  | .5   | * .1 | .2   | .4   | 1.3  | .0   | .3  | 22.8  |       |              |
|              | TOT %  | 12.6 | 7.6  | .5   | * .1 | .2   | .4   | 1.3  | .0   | .3  | 23.0  |       |              |
| 10+          | PCP    | * .0 | * .0 | * .0 | .0   | .0   | * .0 | * .0 | * .0 | .0  | .0    | *     |              |
|              | NO PCP | 39.6 | 23.2 | 1.1  | .1   | .6   | .7   | .8   | 4.0  | .0  | 1.2   | 71.3  |              |
|              | TOT %  | 39.6 | 23.2 | 1.1  | .1   | .6   | .7   | .9   | 4.0  | .0  | 1.2   | 71.3  |              |
| TOT OBS      |        |      |      |      |      |      |      |      |      |     |       |       |              |
| TOT PCT      |        | 54.9 | 32.6 | 1.8  | .2   | .7   | .9   | 1.5  | 5.8  | .0  | 1.6   | 100.0 | 7784         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | *    | .1    |              |
|              | 4-10       | .0   | .0   | * .0 | * .0 | .0   | .0   | * .0 | * .0 | .0  | * .0 |       |              |
|              | 11-21      | * .0 | * .0 | * .0 | * .0 | .0   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | * .0 | * .0 | * .0 | * .0 | .0   | .0   | .0   | * .0 | .0  | * .0 | .1    |              |
| 1/2<1        | 0-3        | .0   | * .0 | * .0 | .0   | .0   | .0   | * .0 | * .0 | .0  | *    | .3    |              |
|              | 4-10       | .1   | .1   | * .0 | * .0 | .0   | .0   | * .1 | * .0 | .0  | .0   | .3    |              |
|              | 11-21      | .2   | .1   | * .0 | * .0 | .0   | .0   | * .0 | * .0 | .0  | .0   | .3    |              |
|              | 22+        | .1   | * .0 | * .0 | * .0 | .0   | .0   | .0   | .0   | .0  | .0   | .2    |              |
|              | TOT %      | .4   | .2   | * .0 | * .0 | .0   | .0   | * .1 | * .0 | .0  | * .0 | .8    |              |
| 1<2          | 0-3        | * .0 | * .0 | * .0 | .0   | .0   | .0   | * .0 | * .0 | .0  | .1   | .1    |              |
|              | 4-10       | .2   | .1   | * .0 | * .0 | .0   | .0   | * .1 | * .0 | .0  | .0   | .3    |              |
|              | 11-21      | .2   | .2   | * .0 | * .0 | .0   | .0   | * .0 | * .0 | .0  | .0   | .4    |              |
|              | 22+        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .3   | .3   | * .0 | * .0 | .0   | .0   | * .1 | * .1 | .0  | .1   | 1.0   |              |
| 2<5          | 0-3        | * .0 | * .0 | * .0 | .0   | * .0 | * .0 | * .0 | * .0 | .0  | .1   | .2    |              |
|              | 4-10       | .5   | .4   | .1   | * .0 | .0   | * .0 | * .2 | .0   | .0  | .0   | 1.2   |              |
|              | 11-21      | .9   | .6   | .1   | .0   | * .0 | * .0 | * .0 | * .0 | .0  | .0   | 1.5   |              |
|              | 22+        | .2   | .2   | .0   | .0   | .0   | * .0 | * .0 | .0   | .0  | .0   | .4    |              |
|              | TOT %      | 1.6  | 1.1  | .2   | * .0 | * .0 | * .1 | .2   | .0   | .1  | .2   | 3.4   |              |
| 5<10         | 0-3        | .2   | .1   | * .0 | * .0 | * .1 | * .1 | * .0 | * .0 | .0  | .3   | .8    |              |
|              | 4-10       | 2.9  | 1.7  | .3   | .1   | .1   | .1   | .2   | .7   | .0  | .0   | 6.0   |              |
|              | 11-21      | 6.4  | 4.8  | .2   | * .0 | * .1 | .3   | .1   | .3   | .0  | .0   | 11.8  |              |
|              | 22+        | 1.4  | 1.7  | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .0  | .0   | 3.1   |              |
|              | TOT %      | 11.0 | 8.2  | .5   | .1   | .1   | .2   | .3   | 1.1  | .0  | .3   | 21.7  |              |
| 10+          | 0-3        | .8   | .3   | .1   | * .1 | .1   | .2   | .4   | .0   | .0  | 1.1  | 3.1   |              |
|              | 4-10       | 11.0 | 6.3  | .7   | .1   | .3   | .4   | .7   | 2.8  | .0  | .0   | 22.2  |              |
|              | 11-21      | 21.4 | 16.6 | .6   | * .1 | .1   | .1   | .9   | .0   | .0  | .0   | 39.8  |              |
|              | 22+        | 3.4  | 4.5  | .2   | .0   | * .0 | * .0 | * .0 | .0   | .0  | .0   | 8.0   |              |
|              | TOT %      | 36.5 | 27.7 | 1.5  | .1   | .5   | .6   | 1.0  | 4.1  | .0  | 1.1  | 73.0  |              |
| TOT OBS      |            |      |      |      |      |      |      |      |      |     |      |       |              |
| TOT PCT      |            | 49.9 | 37.6 | 2.2  | .2   | .6   | .8   | 1.5  | 5.6  | .0  | 1.6  | 100.0 | 11184        |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3999 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .0         | .2         | .6         | 1.6          | 1.6          | .7           | .1           | .2           | .9    | 5.9   | 94.1               | 1628         |
| 06009          | .2         | .1         | .3         | 1.0        | 4.0          | 2.4          | 1.8          | .4           | .1           | .8    | 11.1  | 88.9               | 1566         |
| 12015          | .1         | .0         | .4         | .8         | 1.9          | 2.4          | 1.8          | .7           | .5           | 1.1   | 9.6   | 90.4               | 1818         |
| 18021          | .1         | .0         | .2         | .3         | 1.8          | 1.7          | 1.0          | .3           | .5           | 1.3   | 7.3   | 92.7               | 1733         |
| TOT            | 5          | 2          | 20         | 47         | 154          | 136          | 89           | 25           | 24           | 70    | 572   | 6173               | 6745         |
| PCT            | .1         | *          | .3         | .7         | 2.3          | 2.0          | 1.3          | .4           | .4           | 1.0   | 8.5   | 91.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .6    | .8  | 3.7 | 19.7 | 75.1 | 2541         |
| 06009          | .3   | 1.0   | .8  | 2.8 | 23.0 | 72.2 | 3032         |
| 12015          | .2   | .5    | .9  | 4.2 | 20.6 | 73.5 | 2649         |
| 18021          | .2   | 1.0   | 1.4 | 3.0 | 22.8 | 71.6 | 3140         |
| TOT            | 22   | 91    | 113 | 383 | 2458 | 8295 | 11362        |
| PCT            | .2   | .8    | 1.0 | 3.4 | 21.6 | 73.0 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0            | .3         | 4.9         | 4.8             | 90.3              | 1590         |
| 06009          | .2            | .7         | 4.7         | 9.2             | 86.1              | 1525         |
| 12015          | .1            | .6         | 6.1         | 7.7             | 86.2              | 1783         |
| 18021          | .1            | .4         | 4.5         | 6.4             | 89.1              | 1694         |
| TOT            | 5             | 30         | 333         | 464             | 5795              | 6592         |
| PCT            | .1            | .5         | 5.1         | 7.0             | 87.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | *     | *     | .0    | *     | .0     | 4            | .1          |
| 75/79  | .0   | *     | *     | .2    | .4    | .6    | .3    | *      | 101          | 1.6         |
| 70/74  | .0   | *     | .0    | .4    | 3.5   | 6.3   | 4.9   | 1.4    | 1037         | 16.6        |
| 65/69  | .0   | .0    | .0    | .5    | 3.8   | 16.7  | 24.6  | 11.0   | 3530         | 56.6        |
| 60/64  | .0   | .0    | *     | *     | .8    | 5.4   | 12.2  | 6.6    | 1564         | 25.1        |
| 55/59  | .0   | .0    | .0    | .0    | *     | *     | *     | *      | 6            | .1          |
| TOTAL  | 0    | 2     | 4     | 72    | 535   | 1812  | 2624  | 1193   | 6242         | 100.0       |
| PCT    | .0   | *     | .1    | 1.2   | 8.6   | 29.0  | 42.0  | 19.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|----|----|-----|-----|-----|------|
| 80/84 | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 75/79 | .7   | .5   | .1  | *  | *  | *  | *   | .1  | .0  | *    |
| 70/74 | 8.8  | 5.1  | .5  | *  | .2 | .2 | .3  | 1.3 | .0  | .2   |
| 65/69 | 32.1 | 17.9 | .8  | .1 | .4 | .5 | .7  | 3.5 | .0  | .6   |
| 60/64 | 13.5 | 9.9  | .3  | .1 | .1 | .1 | .2  | .7  | .0  | .3   |
| 55/59 | *    | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| TOTAL | 55.2 | 33.5 | 1.6 | .2 | .7 | .8 | 1.2 | 5.7 | .0  | 1.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 84  | 72  | 70  | 65  | 62 | 60 | 56  | 65.5 | 3213         |
| 06009          | 83  | 72  | 70  | 65  | 61 | 60 | 52  | 65.4 | 4434         |
| 12015          | 83  | 77  | 74  | 68  | 63 | 61 | 57  | 68.5 | 3255         |
| 18021          | 86  | 78  | 74  | 68  | 63 | 62 | 59  | 68.0 | 4387         |
| TOT            | 86  | 76  | 73  | 66  | 62 | 60 | 52  | 66.8 | 15289        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .5    | 4.2   | 19.4  | 47.4  | 28.5   | 84   | 1562         |
| 06009          | .0   | .8    | 4.6   | 20.9  | 46.1  | 27.6   | 84   | 1569         |
| 12015          | .0   | 1.9   | 14.6  | 39.1  | 35.4  | 8.9    | 78   | 1608         |
| 18021          | .0   | 1.9   | 10.6  | 35.5  | 39.5  | 12.4   | 79   | 1647         |
| TOT            | 0    | 84    | 547   | 1845  | 2684  | 1226   | 81   | 6386         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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20.3N 18.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 3     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | *        | *        | 8     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | *        | .1       | .1       | .1       | *        | 30    | *        | .4        |
| 9/10               | .0       | .0       | .0       | .0       | *        | .1       | .3       | .1       | *        | 45    | *        | .6        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .7       | .7       | .2       | *        | 127   | .1       | 1.7       |
| 6                  | .0       | .0       | .0       | .1       | .3       | .8       | .5       | .1       | .0       | 126   | .1       | 1.6       |
| 5                  | .0       | .0       | *        | .1       | .9       | 2.0      | 1.0      | .1       | .0       | 292   | .2       | 3.9       |
| 4                  | .0       | .0       | .0       | .2       | 2.1      | 2.5      | .6       | *        | *        | 392   | .2       | 5.2       |
| 3                  | .0       | .0       | .0       | .6       | 3.4      | 3.1      | .5       | .0       | .0       | 543   | .3       | 7.3       |
| 2                  | .0       | .0       | .0       | 1.9      | 6.1      | 3.8      | .4       | *        | .0       | 879   | .3       | 12.0      |
| 1                  | .0       | .0       | .1       | 3.6      | 8.7      | 4.0      | .2       | *        | .0       | 1179  | .4       | 16.1      |
| 0                  | .0       | .0       | .1       | 5.3      | 9.3      | 2.8      | .1       | *        | *        | 1266  | .4       | 17.3      |
| -1                 | .0       | .0       | *        | 4.5      | 7.6      | 1.6      | *        | *        | .0       | 988   | .3       | 13.5      |
| -2                 | .0       | .0       | .1       | 3.3      | 4.5      | .6       | .1       | *        | .0       | 616   | .2       | 8.4       |
| -3                 | .0       | .0       | *        | 1.5      | 1.9      | .4       | *        | *        | .0       | 278   | *        | 3.9       |
| -4                 | .0       | .0       | .1       | 1.2      | 1.0      | .2       | *        | .0       | .0       | 179   | *        | 2.5       |
| -5                 | .0       | .0       | .1       | .7       | .5       | .1       | *        | .0       | .0       | 104   | .1       | 1.4       |
| -6                 | .0       | .0       | *        | .2       | .1       | *        | .0       | .0       | .0       | 27    | *        | .3        |
| -7/-8              | .0       | .0       | .1       | .3       | .1       | *        | .0       | .0       | .0       | 38    | *        | .5        |
| -9/-10             | .0       | .0       | *        | *        | .1       | *        | .0       | .0       | .0       | 13    | *        | .2        |
| -11/-13            | *        | *        | *        | .1       | *        | *        | .0       | .0       | .0       | 9     | *        | .1        |
| -14/-16            | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 1        | 1        | 43       | 1489     | 3367     | 1631     | 337      | 58       | 19       | 7146  | 201      | 6945      |
| PCT                | *        | *        | .6       | 23.6     | 47.1     | 22.8     | 4.7      | .8       | .3       | 100.0 | 2.8      | 97.2      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .5  | 1.9  | .3    | .0    | .0    | .0  | 2.7  | .2  | .7   | .1    | .0    | .0    | .0  | 1.0  |
| 1-2     | .6  | 7.5  | 4.6   | .0    | .0    | .0  | 12.7 | .1  | 3.2  | 2.6   | .0    | .0    | .0  | 5.9  |
| 3-4     | .1  | 3.9  | 11.5  | .8    | .0    | .0  | 16.3 | *   | 1.7  | 6.0   | .8    | .0    | .0  | 8.5  |
| 5-6     | *   | 1.3  | 10.5  | 1.7   | *     | .0  | 13.6 | .0  | .3   | 5.8   | 1.6   | .0    | .0  | 7.7  |
| 7       | .0  | .0   | 4.9   | 1.9   | .1    | .0  | 7.5  | .0  | .1   | 2.9   | 1.7   | *     | .0  | 4.6  |
| 8-9     | .0  | .0   | 1.3   | .9    | *     | .0  | 2.2  | .0  | .0   | .9    | .9    | *     | .0  | 1.9  |
| 10-11   | .0  | .0   | .5    | .9    | *     | .0  | 1.5  | .0  | *    | .2    | .5    | *     | .0  | .7   |
| 12      | .0  | .0   | .1    | .2    | *     | .0  | .3   | .0  | .0   | *     | .1    | *     | .0  | .2   |
| 13-16   | .0  | .0   | *     | .1    | *     | .0  | .2   | .0  | *    | .0    | .2    | .1    | .0  | .3   |
| 17-19   | .0  | .0   | *     | .0    | *     | .0  | *    | .0  | .0   | *     | *     | *     | .0  | .1   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.2 | 15.3 | 33.7  | 6.6   | .2    | .0  | 57.0 | .4  | 6.0  | 18.5  | 5.8   | .2    | .0  | 30.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .2   | .0    | .0    | .0    | .0  | .2  | *   | *    | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .4   | .1    | .0    | .0    | .0  | .5  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 3-4     | .0  | .2   | .2    | .0    | .0    | .0  | .4  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 5-6     | .0  | *    | .1    | *     | .0    | .0  | .2  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | *   | .8   | .5    | *     | .0    | .0  | 1.4 | *   | .1   | *     | .0    | .0    | .0  | .2  |



PERIOD: (OVER-ALL) 1963-1973

MARCH

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | .1    | .0    | .0    | .0  | .1  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .1  | .2   | .1    | .0    | .0    | .0  | .3  | .1  | .3   | .0    | .0    | .0    | .0  | .4  |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .4   | .2    | .0    | .0    | .0  | .7  | .1  | .5   | .2    | .0    | .0    | .0  | .8  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .3  | .8   | .0    | .0    | .0    | .0  | 1.1 |           |
| 1-2     | .1  | .3   | .0    | .0    | .0    | .0  | .4  | .2  | 2.1  | .4    | .0    | .0    | .0  | 2.7 |           |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .1  | .6   | .4    | .0    | .0    | .0  | 1.0 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .5    | .0    | .0    | .0  | .6  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .3    | .0    | .0    | .0  | .3  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .3  | .6   | .1    | .0    | .0    | .0  | 1.0 | .6  | 3.5  | 1.6   | .0    | .0    | .0  | 5.8 | 97.7      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.2 | 3.9  | .4    | .0    | .0    | .0  | 8.5   |         |
| 1-2     | 1.2 | 14.0 | 7.8   | .0    | .0    | .0  | 22.9  |         |
| 3-4     | .3  | 6.7  | 18.2  | 1.6   | .0    | .0  | 26.8  |         |
| 5-6     | .0  | 1.8  | 16.8  | 3.3   | .0    | .0  | 21.9  |         |
| 7       | .0  | .6   | 8.1   | 3.5   | .1    | .0  | 12.3  |         |
| 8-9     | .0  | .0   | 2.3   | 1.8   | .0    | .0  | 4.1   |         |
| 10-11   | .0  | .1   | .8    | 1.4   | .1    | .0  | 2.3   |         |
| 12      | .0  | .0   | .1    | .3    | .0    | .0  | .4    |         |
| 13-16   | .0  | .0   | .0    | .3    | .1    | .0  | .5    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.7 | 27.1 | 54.4  | 12.4  | .4    | .0  | 100.0 | 4205    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | 1.0 | 6.5  | 10.2 | 7.0  | 4.1  | 1.4 | .5    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1598  | 4        |
| 6-7          | .1  | 1.4  | 5.6  | 6.0  | 5.5  | 2.9 | 1.7   | .4  | .5    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1246  | 6        |
| 8-9          | .0  | .3   | 1.4  | 2.9  | 4.2  | 1.9 | 1.3   | .6  | .7    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 687   | 7        |
| 10-11        | .0  | .4   | .8   | 1.0  | 1.8  | 1.8 | .8    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 359   | 7        |
| 12-13        | .0  | .0   | .6   | .8   | .8   | .5  | .6    | .3  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 196   | 7        |
| >13          | .0  | .0   | .0   | .3   | .3   | .2  | .2    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 64    | 8        |
| INDET        | 2.3 | 3.5  | 3.8  | 4.3  | 3.3  | 1.2 | .7    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1004  | 4        |
| TOTAL        | 176 | 628  | 1160 | 1149 | 1030 | 511 | 298   | 90  | 93    | 17    | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 5134  | 5        |
| PCT          | 3.4 | 12.2 | 22.5 | 22.3 | 20.0 | 9.9 | 5.8   | 1.7 | 1.8   | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

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TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .2   | .1        | *    | .0        | .0   | .0              | .0   | .3              | .1             | .3                      | 3.5         | *                   | 7.6        | 1.9                  | 86.4       |
| NE                 | .1   | *         | *    | .0        | .0   | .0              | .0   | .1              | *              | .3                      | 3.4         | .0                  | 5.3        | 1.3                  | 89.4       |
| E                  | .7   | .0        | .0   | .0        | .0   | .0              | .0   | .7              | .0             | .0                      | 1.0         | .0                  | 3.0        | .0                   | 95.3       |
| SE                 | .0   | 7.8       | .0   | .0        | .0   | .0              | .0   | 7.8             | .0             | .0                      | .0          | .0                  | .0         | .0                   | 92.2       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 4.0                     | 7.9         | .0                  | 3.0        | .0                   | 85.1       |
| SW                 | .9   | .0        | .0   | .0        | .0   | .0              | .0   | .9              | .0             | .0                      | 9.1         | .0                  | 1.8        | .0                   | 88.2       |
| W                  | 1.0  | .0        | .0   | .0        | .0   | .0              | .0   | 1.0             | .0             | 1.4                     | 7.5         | .0                  | 5.1        | .0                   | 85.1       |
| NW                 | .3   | .0        | .2   | .0        | .0   | .0              | .0   | .5              | .3             | .7                      | 5.0         | .0                  | 8.2        | .9                   | 84.3       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 5.6         | .0                  | 2.8        | 1.4                  | 90.1       |
| TOT PCT            | .2   | .1        | .1   | .0        | .0   | .0              | .0   | .3              | .1             | .4                      | 3.6         | *                   | 6.7        | 1.6                  | 87.5       |
| TOT OBS:           | 7885 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THOR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003         | .2                 | .1           | .1   | .0           | .0   | .0                    | .0   | .4                 | .1                      | .6           | 3.1               | .0                        | 5.5           | 1.7                             | 88.7             |
| 06009         | .2                 | .1           | *    | .0           | .0   | .0                    | .0   | .4                 | .1                      | .7           | 4.0               | .0                        | 5.5           | 1.1                             | 88.2             |
| 12015         | .1                 | .0           | .0   | .0           | .0   | .0                    | .0   | .1                 | .0                      | .0           | 3.1               | .0                        | 7.3           | 1.4                             | 88.1             |
| 18021         | *                  | .1           | *    | .0           | .0   | .0                    | .0   | .2                 | .1                      | .1           | 4.3               | *                         | 7.9           | 2.2                             | 89.1             |
| TOT PCT       | .1                 | .1           | *    | .0           | .0   | .0                    | .0   | .3                 | .1                      | .4           | 3.6               | *                         | 6.6           | 1.6                             | 87.5             |
| TOT OBS:      | 8015               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .7                 | 13.5 | 30.0  | 6.2   | .1    | .0  |       | 50.5      | 14.4     |          | 55.6       | 59.5  | 49.9  | 41.5  | 45.2  | 53.0  | 55.6  | 49.5  |
| NE       | .3                 | 8.3  | 24.3  | 6.6   | .2    | .0  |       | 39.7      | 15.7     |          | 34.6       | 31.7  | 40.0  | 48.4  | 45.5  | 40.0  | 34.3  | 40.2  |
| E        | .1                 | 1.0  | .8    | .2    | *     | .0  |       | 2.1       | 13.0     |          | 1.6        | .5    | 2.4   | 2.7   | 2.5   | .2    | 2.0   | 1.9   |
| SE       | *                  | .1   | *     | .0    | .0    | .0  |       | .2        | 7.8      |          | .2         | .0    | .1    | .2    | .2    | .0    | .1    | .2    |
| S        | *                  | .1   | .1    | *     | .0    | .0  |       | .3        | 10.7     |          | .2         | .0    | .4    | .2    | .2    | .0    | .3    | .2    |
| SW       | .1                 | .2   | .1    | *     | .0    | .0  |       | .5        | 9.0      |          | .4         | .0    | .4    | .4    | .5    | .2    | .4    | .7    |
| W        | .2                 | .6   | .2    | *     | .0    | .0  |       | 1.1       | 6.9      |          | 1.2        | .0    | 1.1   | 1.0   | 1.0   | 1.6   | 1.0   | 1.3   |
| NW       | .4                 | 2.7  | 1.6   | .1    | .0    | .0  |       | 4.9       | 9.7      |          | 5.4        | 7.7   | 4.9   | 4.6   | 3.8   | 4.4   | 5.2   | 5.7   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .9                 |      |       |       |       |     |       | .9        | .0       |          | .9         | .5    | .8    | 1.0   | 1.0   | .5    | .9    | .4    |
| TOT OBS  | 427                | 4075 | 8793  | 2015  | 40    | 0   | 15350 |           | 14.4     |          | 2959       | 182   | 2991  | 1456  | 3120  | 205   | 3007  | 1430  |
| TOT PCT  | 2.8                | 26.5 | 57.3  | 13.1  | .3    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 4.5                | 26.4 | 18.6  | 1.0   | *   |           | 50.5     | 14.4     | 55.8       | 47.2  | 45.6  | 53.6  |    |
| NE       | 2.2                | 18.3 | 17.5  | 1.4   | *   |           | 39.7     | 15.7     | 34.5       | 42.8  | 45.2  | 36.2  |    |
| E        | .3                 | 1.2  | .5    | .1    | .0  |           | 2.1      | 13.0     | 1.6        | 2.5   | 2.4   | 2.0   |    |
| SE       | .1                 | .1   | *     | .0    | .0  |           | .2       | 7.8      | .1         | .1    | .2    | .2    |    |
| S        | .1                 | .1   | *     | .0    | .0  |           | .3       | 10.7     | .2         | .1    | .2    | .3    |    |
| SW       | .2                 | .2   | .1    | *     | .0  |           | .5       | 9.0      | .4         | .4    | .5    | .5    |    |
| W        | .6                 | .4   | *     | .0    | .0  |           | 1.1      | 6.9      | 1.1        | 1.1   | 1.1   | 1.1   |    |
| NW       | 1.6                | 2.7  | .5    | .0    | .0  |           | 4.9      | 9.7      | 5.5        | 4.8   | 3.8   | 5.4   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | .9                 |      |       |       |     |           | .9       | .0       | .9         | .9    | 1.0   | .7    |    |
| TOT OBS  | 1617               | 7611 | 5736  | 383   | 3   | 13350     |          | 14.4     | 3141       | 4447  | 3325  | 4437  |    |
| TOT PCT  | 10.5               | 49.6 | 37.4  | 2.5   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 43.6 | 5.4  | 6.2  | 2.7  | 1.5       |                  |
| NE       | 22.6 | 4.7  | 4.3  | 1.6  | 1.9       |                  |
| E        | 1.5  | .2   | .1   | .1   | 1.2       |                  |
| SE       | .1   | *    | *    | .0   | 2.3       |                  |
| S        | .2   | .1   | *    | *    | 1.7       |                  |
| SW       | .1   | .1   | *    | *    | 2.8       |                  |
| W        | .5   | .1   | .1   | .1   | 2.2       |                  |
| NW       | 3.3  | .5   | .5   | .2   | 1.7       |                  |
| VAR      | .0   | .0   | .0   | .0   | .0        |                  |
| CALM     | 1.0  | *    | *    | .1   | .8        |                  |
| TOT OBS  | 4805 | 739  | 744  | 313  | 6601      | 1.7              |
| TOT PCT  | 72.8 | 11.2 | 11.3 | 4.7  | 100.0     |                  |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 43.6 | 5.4  | 6.2  | 2.7  | 1.5       |                  |
| NE       | 22.6 | 4.7  | 4.3  | 1.6  | 1.9       |                  |
| E        | 1.5  | .2   | .1   | .1   | 1.2       |                  |
| SE       | .1   | *    | *    | .0   | 2.3       |                  |
| S        | .2   | .1   | *    | *    | 1.7       |                  |
| SW       | .1   | .1   | *    | *    | 2.8       |                  |
| W        | .5   | .1   | .1   | .1   | 2.2       |                  |
| NW       | 3.3  | .5   | .5   | .2   | 1.7       |                  |
| VAR      | .0   | .0   | .0   | .0   | .0        |                  |
| CALM     | 1.0  | *    | *    | .1   | .8        |                  |
| TOT OBS  | 4805 | 739  | 744  | 313  | 6601      | 1.7              |
| TOT PCT  | 72.8 | 11.2 | 11.3 | 4.7  | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 43.6 | 5.4  | 6.2  | 2.7  | 1.5       |                  |
| NE       | 22.6 | 4.7  | 4.3  | 1.6  | 1.9       |                  |
| E        | 1.5  | .2   | .1   | .1   | 1.2       |                  |
| SE       | .1   | *    | *    | .0   | 2.3       |                  |
| S        | .2   | .1   | *    | *    | 1.7       |                  |
| SW       | .1   | .1   | *    | *    | 2.8       |                  |
| W        | .5   | .1   | .1   | .1   | 2.2       |                  |
| NW       | 3.3  | .5   | .5   | .2   | 1.7       |                  |
| VAR      | .0   | .0   | .0   | .0   | .0        |                  |
| CALM     | 1.0  | *    | *    | .1   | .8        |                  |
| TOT OBS  | 4805 | 739  | 744  | 313  | 6601      | 1.7              |
| TOT PCT  | 72.8 | 11.2 | 11.3 | 4.7  | 100.0     |                  |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING (FEET) | > 10 | > 5 | > 2 | > 1 | > 1/2 | > 1/4 | > 50 YD | > 0 |
|----------------|------|-----|-----|-----|-------|-------|---------|-----|
| > 6500         | .7   | 1.1 | 1.1 | 1.1 | 1.1   | 1.1   | 1.1     | 1.1 |
| > 5000         | 1.0  | 1.5 | 1.6 | 1.6 | 1.6   | 1.6   | 1.6     | 1.6 |
| > 3500         | 1.9  | 2.7 | 2.9 | 2.9 | 2.9   | 2.9   | 2.9     | 2.9 |
| > 2000         | 3.7  | 5.2 | 5.5 | 5.6 | 5.6   | 5.6   | 5.6     | 5.6 |
| > 1000         | 5.3  | 7.7 | 8.0 | 8.0 | 8.0   | 8.1   | 8.1     | 8.1 |
| > 600          | 5.8  | 8.6 | 9.0 | 9.0 | 9.0   | 9.1   | 9.1     | 9.1 |
| > 300          | 5.9  | 8.6 | 9.1 | 9.1 | 9.1   | 9.1   | 9.1     | 9.1 |
| > 150          | 5.9  | 8.7 | 9.1 | 9.1 | 9.1   | 9.2   | 9.2     | 9.2 |
| > 0            | 5.9  | 8.8 | 9.3 | 9.3 | 9.3   | 9.3   | 9.3     | 9.3 |
| TOTAL          | 392  | 584 | 616 | 618 | 619   | 620   | 620     | 620 |

TOTAL NUMBER OF OBS: 6651

PCT FREQ NH < 5/8: 90.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 8 OBS | TOTAL OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 63.9 | 11.0 | 6.8 | 5.2 | 3.1 | 2.3 | 2.5 | 2.0 | 2.9 | .1    | 6877      |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM)                                   |        | N    | NE   | E    | SE   | S    | SW   | W    | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |
|--|--------|------|------|------|------|------|------|------|-----|-----|------|------|--------------|
| <1/2   | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0           |
|  | NO PCP | * .0 | .0   | .0   | .0   | .0   | .0   | * .0 | .0  | .0  | .0   | .0   | *            |
|  | TOT %  | * .0 | .0   | .0   | .0   | .0   | .0   | * .0 | .0  | .0  | .0   | .0   | *            |
| 1/2<1  | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0           |
|  | NO PCP | .7   | .7   | * .0 | * .0 | * .0 | * .0 | * .1 | .0  | .0  | * .1 | 1.6  | *            |
|  | TOT %  | .7   | .7   | * .0 | * .0 | * .0 | * .0 | * .1 | .0  | .0  | * .1 | 1.6  | *            |
| 1<2  | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0           |
|  | NO PCP | .8   | .3   | * .0 | .0   | .0   | .0   | .0   | .1  | .0  | .0   | 1.2  | *            |
|  | TOT %  | .8   | .3   | * .0 | .0   | .0   | .0   | .0   | .1  | .0  | .0   | 1.2  | *            |
| 2<5  | PCP    | .0   | * .0 | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0   | .0   | .0           |
|  | NO PCP | 2.4  | .9   | * .0 | * .0 | * .0 | * .0 | * .2 | .0  | .0  | .1   | 3.7  | *            |
|  | TOT %  | 2.4  | .9   | * .0 | * .0 | * .0 | * .0 | * .2 | .0  | .0  | .1   | 3.7  | *            |
| 5<10   | PCP    | .1   | * .0 | * .0 | .0   | .0   | * .0 | * .0 | .0  | .0  | .0   | .2   | .0           |
|  | NO PCP | 17.4 | 8.7  | .3   | .1   | .1   | .1   | .3   | 1.6 | .0  | .2   | 28.8 | *            |
|  | TOT %  | 17.5 | 8.7  | .3   | .1   | .1   | .1   | .3   | 1.6 | .0  | .2   | 29.0 | *            |
| 10+  | PCP    | .1   | * .0 | .0   | .0   | .0   | .0   | .0   | .0  | .0  | .0   | .1   | .0           |
|  | NO PCP | 35.6 | 23.0 | 1.4  | .1   | .2   | .2   | .6   | 2.8 | .0  | .6   | 64.4 | *            |
|  | TOT %  | 35.7 | 23.0 | 1.4  | .1   | .2   | .2   | .6   | 2.8 | .0  | .6   | 64.5 | *            |
| TOT OBS  |        |      |      |      |      |      |      |      |     |     |      |      |              |
| TOT PCT  |        |      |      |      |      |      |      |      |     |     |      |      |              |
| 57.1 33.6 1.8 .1 .3 .3 .9 4.7 .0 .9 100.0 7871 |        |      |      |      |      |      |      |      |     |     |      |      |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM)                                     | SPD<br>KTS | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT  | TOTAL<br>OBS |
|--|------------|------|------|------|------|------|------|------|------|-----|------|------|--------------|
| <1/2   | 0-3        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0   | .0           |
|  | 4-10       | * .0 | .0   | .0   | .0   | .0   | .0   | * .0 | .0   | .0  | .0   | .1   | *            |
|  | 11-21      | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0   | *            |
|  | 22+        | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0   | .0           |
|  | TOT %      | .1   | .0   | .0   | .0   | .0   | .0   | * .0 | .0   | .0  | .0   | .1   | *            |
| 1/2<1  | 0-3        | * .0 | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | .0  | * .0 | * .0 | *            |
|  | 4-10       | .1   | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | .0  | .0   | .2   | *            |
|  | 11-21      | .4   | .4   | .0   | .0   | .0   | .0   | * .0 | * .0 | .0  | .0   | .8   | *            |
|  | 22+        | * .1 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .1   | *            |
|  | TOT %      | .5   | .5   | * .0 | * .0 | * .0 | * .0 | * .1 | .0   | .0  | * .1 | 1.1  | *            |
| 1<2  | 0-3        | * .0 | * .0 | .0   | .0   | * .0 | * .0 | .0   | .0   | .0  | .0   | .0   | .0           |
|  | 4-10       | .1   | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | .0  | .0   | .2   | *            |
|  | 11-21      | .4   | .2   | * .0 | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .6   | *            |
|  | 22+        | .1   | .1   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .2   | *            |
|  | TOT %      | .7   | .3   | * .0 | * .0 | * .0 | * .0 | .0   | .0   | .0  | .0   | 1.0  | *            |
| 2<5  | 0-3        | * .0 | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | .0  | .1   | .2   | *            |
|  | 4-10       | .6   | .3   | * .0 | .0   | * .0 | * .0 | * .1 | .0   | .0  | .0   | 1.0  | *            |
|  | 11-21      | 1.2  | .5   | .0   | * .0 | * .0 | * .0 | * .1 | .0   | .0  | .0   | 1.8  | *            |
|  | 22+        | .3   | .2   | * .0 | .0   | .0   | .0   | * .0 | .0   | .0  | .0   | .5   | *            |
|  | TOT %      | 2.1  | .9   | * .0 | * .0 | * .0 | * .0 | * .2 | .0   | .0  | .1   | 3.5  | *            |
| 5<10   | 0-3        | .2   | .1   | * .0 | .0   | * .0 | * .0 | * .1 | .0   | .0  | .2   | .7   | *            |
|  | 4-10       | 3.8  | 1.8  | .1   | * .0 | * .0 | .2   | .8   | .0   | .0  | .0   | 6.8  | *            |
|  | 11-21      | 9.6  | 5.1  | .2   | * .0 | * .0 | * .7 | .0   | .0   | .0  | .0   | 15.7 | *            |
|  | 22+        | 2.1  | 1.5  | * .0 | .0   | * .0 | * .0 | .0   | .0   | .0  | .0   | 3.7  | *            |
|  | TOT %      | 15.7 | 8.5  | .4   | .1   | .1   | .2   | 1.6  | .0   | .2  | .2   | 26.9 | *            |
| 10+  | 0-3        | .6   | .2   | * .0 | .0   | * .0 | .2   | .3   | .0   | .0  | .6   | 1.9  | *            |
|  | 4-10       | 9.2  | 5.1  | .8   | * .1 | .1   | .3   | 1.9  | .0   | .0  | .0   | 17.5 | *            |
|  | 11-21      | 21.2 | 16.7 | .5   | * .1 | .1   | .1   | .8   | .0   | .0  | .0   | 39.4 | *            |
|  | 22+        | 4.1  | 4.3  | .1   | .0   | * .0 | * .0 | .0   | .0   | .0  | .0   | 8.5  | *            |
|  | TOT %      | 35.0 | 26.3 | 1.4  | .1   | .2   | .2   | .6   | 3.0  | .0  | .6   | 67.4 | *            |
| TOT OBS  |            |      |      |      |      |      |      |      |      |     |      |      |              |
| TOT PCT  |            |      |      |      |      |      |      |      |      |     |      |      |              |
| 54.1 36.5 1.8 .1 .3 .4 .9 4.9 .0 1.0 100.0 11147 |            |      |      |      |      |      |      |      |      |     |      |      |              |

## APRIL

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+    | TOTAL      | NM <5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|----------|------------|--------------------|---------------|
| 00003          | .2         | .0         | .1         | .5         | 1.5          | 1.8          | .6           | .4           | .2           | .3       | 5.6        | 94.4               | 1630          |
| 06009          | .2         | .1         | .2         | 1.7        | 4.0          | 3.5          | 1.6          | .5           | .4           | 1.1      | 13.1       | 86.9               | 1616          |
| 12015          | .3         | .1         | .0         | 1.0        | 2.3          | 3.1          | 1.7          | .6           | .5           | .7       | 10.4       | 89.6               | 1847          |
| 18021          | .1         | .0         | .0         | .7         | 1.9          | 1.9          | 1.2          | .3           | .3           | .9       | 7.3        | 92.7               | 1725          |
| TOT<br>PCT     | 12<br>.2   | 3<br>*     | 4<br>.1    | 66<br>1.0  | 164<br>2.4   | 177<br>2.6   | 87<br>1.3    | 33<br>.5     | 25<br>.4     | 51<br>.7 | 622<br>9.1 | 6196<br>90.9       | 6818<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS8Y (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1      | 1<2        | 2<5        | 5<10         | 10+          | TOTAL<br>OBS   |
|----------------|---------|------------|------------|------------|--------------|--------------|----------------|
| 00003          | *       | 1.1        | .7         | 3.3        | 25.3         | 69.5         | 2459           |
| 06009          | .1      | 1.3        | .8         | 3.2        | 26.8         | 67.8         | 3059           |
| 12015          | *       | .8         | .9         | 3.8        | 27.1         | 67.4         | 2661           |
| 18021          | .1      | 1.5        | 1.5        | 3.9        | 27.9         | 65.0         | 3097           |
| TOT<br>PCT     | 7<br>.1 | 134<br>1.2 | 112<br>1.0 | 404<br>3.6 | 3028<br>26.9 | 7591<br>67.3 | 11276<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS8Y (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS  |
|----------------|---------------|------------|-------------|----------------|-------------------|---------------|
| 00003          | .1            | .2         | 4.4         | 5.0            | 90.6              | 1574          |
| 06009          | .2            | .5         | 6.1         | 10.4           | 83.5              | 1568          |
| 12015          | .3            | .4         | 5.3         | 8.9            | 85.8              | 1813          |
| 18021          | .1            | .2         | 5.4         | 6.4            | 88.3              | 1696          |
| TOT<br>PCT     | 11<br>.2      | 22<br>.3   | 352<br>5.3  | 511<br>7.7     | 5788<br>87.0      | 6651<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | *     | *     | *     | .0    | .0     | 5            | .1          |
| 75/79  | .0   | .0    | *     | .2    | .4    | .4    | .2    | .0     | 82           | 1.3         |
| 70/74  | .0   | .0    | .0    | .4    | 3.2   | 6.1   | 2.4   | .8     | 811          | 13.0        |
| 65/69  | .0   | .0    | .0    | .4    | 4.7   | 17.4  | 22.9  | 8.8    | 3397         | 54.3        |
| 60/64  | .0   | .0    | *     | .0    | .8    | 6.6   | 14.3  | 9.6    | 1961         | 31.3        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | *     | *      | 4            | .1          |
| TOTAL  | 0    | 3     | 71    | 571   | 1918  | 2491  | 1206  | 6260   |              |             |
| PCT    | .0   | .0    | *     | 1.1   | 9.1   | 30.6  | 39.8  | 19.3   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|  | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|--|------|------|-----|----|----|----|----|-----|-----|------|
|  | *    | *    | *   | *  | .0 | .0 | .0 | .0  | .0  | .0   |
|  | .7   | .4   | .1  | *  | .0 | *  | *  | .1  | .0  | *    |
|  | 6.9  | 5.0  | .1  | *  | .1 | .1 | .2 | .6  | .0  | .1   |
|  | 31.0 | 18.9 | .4  | .1 | .1 | .2 | .6 | 2.7 | .0  | .3   |
|  | 19.0 | 9.9  | 1.2 | *  | *  | *  | .1 | 1.0 | .0  | *    |
|  | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   |
|  | 57.7 | 34.3 | 1.7 | .2 | .2 | .3 | .9 | 4.3 | .0  | .4   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 84  | 72  | 69  | 65  | 62 | 60 | 55  | 65.4 | 3152         |
| 06009          | 85  | 73  | 70  | 65  | 61 | 60 | 54  | 65.5 | 4423         |
| 12015          | 86  | 78  | 74  | 68  | 63 | 62 | 54  | 68.4 | 3262         |
| 18021          | 86  | 78  | 74  | 68  | 63 | 62 | 54  | 68.0 | 4354         |
| TOT            | 86  | 77  | 73  | 66  | 62 | 61 | 54  | 66.8 | 15191        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .4    | 3.1   | 21.6  | 47.3  | 27.6   | 84   | 1523         |
| 06009          | .0   | 1.0   | 4.5   | 22.7  | 44.4  | 27.3   | 84   | 1562         |
| 12015          | .0   | 2.3   | 16.9  | 40.3  | 30.8  | 9.8    | 77   | 1626         |
| 18021          | .0   | 1.2   | 11.5  | 36.9  | 37.3  | 13.1   | 79   | 1628         |
| TOT            | 0    | 78    | 580   | 1939  | 2522  | 1220   | 81   | 6339         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | *        | .0       | *        | *        | .0       | 5     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | .1       | .1       | *        | 19    | .0       | .3        |
| 11/13              | .0       | .0       | .0       | .0       | *        | .3       | .2       | *        | .0       | 37    | *        | .5        |
| 9/10               | .0       | .0       | *        | .1       | .3       | .5       | .1       | *        | .0       | 75    | .1       | 1.0       |
| 7/8                | .0       | .0       | *        | .2       | 1.0      | .6       | .1       | .0       | .0       | 137   | .2       | 1.7       |
| 6                  | .0       | .0       | .0       | .4       | .6       | .4       | .1       | .0       | .0       | 106   | .1       | 1.4       |
| 5                  | .0       | .0       | .2       | 1.2      | 1.7      | .5       | *        | *        | .0       | 256   | .2       | 3.4       |
| 4                  | .0       | .0       | .5       | 2.5      | 2.1      | .6       | *        | *        | .0       | 405   | .2       | 5.5       |
| 3                  | .0       | *        | 1.1      | 4.1      | 2.7      | .4       | .0       | .0       | .0       | 591   | .3       | 8.0       |
| 2                  | .0       | *        | 3.7      | 6.1      | 2.5      | .3       | *        | .0       | .0       | 905   | .5       | 12.2      |
| 1                  | .0       | *        | 4.9      | 8.2      | 2.3      | .1       | *        | .0       | .0       | 1112  | .5       | 15.1      |
| 0                  | .0       | .1       | 6.8      | 9.0      | 2.1      | .1       | *        | .0       | .0       | 1300  | .8       | 17.4      |
| -1                 | .0       | .1       | 5.1      | 6.6      | 1.4      | .1       | *        | .0       | .0       | 957   | .6       | 12.8      |
| -2                 | .0       | .1       | 3.1      | 4.1      | .5       | *        | .0       | .0       | .0       | 561   | .2       | 7.7       |
| -3                 | .0       | .1       | 1.8      | 2.2      | .1       | *        | .0       | .0       | .0       | 306   | *        | 4.3       |
| -4                 | .0       | .1       | 1.2      | .9       | .2       | *        | .0       | .0       | .0       | 167   | .1       | 2.3       |
| -5                 | .0       | *        | .7       | .6       | .1       | .0       | .0       | .0       | .0       | 96    | *        | 1.3       |
| -6                 | .0       | *        | .3       | .2       | *        | .0       | .0       | .0       | .0       | 41    | *        | .6        |
| -7/-8              | *        | .1       | .3       | .1       | .0       | .0       | .0       | .0       | .0       | 44    | .1       | .5        |
| -9/-10             | *        | .1       | .1       | *        | .0       | .0       | .0       | .0       | .0       | 14    | *        | .2        |
| -11/-13            | .1       | *        | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 12    | .0       | .2        |
| -14/-16            | .0       | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 9        | 63       | 2140     | 3321     | 1263     | 273      | 59       | 18       | 1        | 7147  | 277      | 6870      |
| PCT                | .1       | .9       | 29.9     | 46.5     | 17.7     | 3.8      | .8       | .3       | *        | 100.0 | 3.9      | 96.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | .4  | 1.7  | .2    | .0    | .0    | .0  | 2.3  | .1  | .5   | *     | .0    | .0    | .0  | .6   |
| 1-2     | .2  | 6.0  | 4.2   | .0    | .0    | .0  | 10.4 | *   | 2.8  | 2.5   | .0    | .0    | .0  | 5.3  |
| 3-4     | *   | 3.8  | 14.1  | 1.6   | .0    | .0  | 19.5 | *   | 1.5  | 7.2   | .9    | .0    | .0  | 9.6  |
| 5-6     | .0  | .3   | 11.0  | 1.9   | *     | .0  | 13.5 | .0  | .4   | 5.6   | 1.4   | *     | .0  | 7.4  |
| 7       | .0  | .3   | 5.7   | 2.5   | .0    | .0  | 8.5  | .0  | *    | 3.5   | 1.6   | .0    | .0  | 5.2  |
| 8-9     | .0  | .1   | 1.7   | 1.9   | *     | .0  | 3.7  | .0  | *    | 1.0   | .9    | .0    | .0  | 1.9  |
| 10-11   | .0  | *    | .7    | .8    | .0    | .0  | 1.5  | .0  | .0   | .3    | .8    | *     | .0  | 1.0  |
| 12      | .0  | *    | .1    | .2    | .0    | .0  | .3   | .0  | *    | .2    | .0    | .0    | .0  | .3   |
| 13-16   | .0  | .0   | .1    | .1    | *     | .0  | .2   | .0  | .0   | .1    | .1    | *     | .0  | .2   |
| 17-19   | .0  | .0   | *     | *     | *     | .0  | .1   | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 12.4 | 37.8  | 9.0   | .1    | .0  | 60.0 | .1  | 5.3  | 20.3  | 6.0   | *     | .0  | 31.7 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | .1   | *     | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | 1.4  | *     | *     | .0    | .0  | 1.4 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | *     | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 1.5  | .3    | .1    | *     | .0  | 2.0 | .0  | .0   | *     | .0    | .0    | .0  | *   |



PERIOD: (OVER-ALL) 1963-1973

APRIL  
TABLE 18 (CONT)AREA 0006 CAPE BLANC  
20.3N 18.1W

## PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | *    | .0    | .0    | .0    | .0  | *   | .0 | *   | .0   | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | *    | .0    | .0    | .0    | .0  | .1  | .0 | *   | .0   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | *    | *     | .0    | .0    | .0  | .1  | .0 | *   | *    | .0    | .0    | .0    | .0  | *   |
| 5-6     | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0 | *   | *    | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | *   | .0 | .0  | *    | *     | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .1   | .2    | *     | .0    | .0  | .3  | *  | .1  | .1   | *     | .0    | .0    | .0  | .2  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | NW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .1  | .2 | .1  | .2   | .0    | .0    | .0    | .0  | .3   |           |
| 1-2     | .1  | .1   | .1    | .0    | .0    | .0  | .2  | .5 | .1  | 1.2  | .5    | .0    | .0    | .0  | 1.7  |           |
| 3-4     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .8 | .0  | .5   | .8    | .0    | .0    | .0  | 1.2  |           |
| 5-6     | .0  | *    | .0    | .0    | .0    | .0  | *   | .5 | .0  | *    | .5    | .0    | .0    | .0  | .5   |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .1 | .0  | *    | *     | .0    | .0    | .0  | .1   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | *    | *     | .0    | .0    | .0  | *    |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .1 | .0  | .0   | .1    | .0    | .0    | .0  | .1   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | *     | .0    | .0    | .0  | *    |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .1  | .2   | .1    | .0    | .0    | .0  | .5  | .2 | 1.9 | 1.9  | *     | .0    | .0    | .0  | 98.7 |           |

## WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.1 | 2.4  | .3    | .0    | .0    | .0  | 4.8   |         |
| 1-2     | .4  | 10.3 | 7.3   | .0    | .0    | .0  | 18.0  |         |
| 3-4     | *   | 5.8  | 22.3  | 2.4   | .0    | .0  | 30.6  |         |
| 5-6     | .0  | 1.0  | 17.3  | 3.5   | *     | .0  | 21.7  |         |
| 7       | .0  | 1.7  | 9.4   | 4.2   | .0    | .0  | 15.3  |         |
| 8-9     | .0  | .1   | 2.7   | 2.9   | *     | .0  | 5.7   |         |
| 10-11   | .0  | *    | 1.0   | 1.5   | *     | .0  | 2.7   |         |
| 12      | .0  | *    | .1    | .4    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | .3    | .2    | *     | .0  | .5    |         |
| 17-19   | .0  | .0   | *     | .1    | *     | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.5 | 21.4 | 60.7  | 15.2  | .1    | .0  | 100.0 | 4204    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

## PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .7  | 5.8  | 8.8  | 6.4  | 5.7  | 1.9  | .8    | .3  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1598     |
| 6-7          | .1  | 1.0  | 5.6  | 7.7  | 7.1  | 3.5  | 1.7   | .4  | .5    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1433     |
| 8-9          | .0  | .3   | 2.1  | 3.0  | 4.3  | 3.1  | 1.6   | .6  | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 822      |
| 10-11        | .0  | .5   | .7   | .7   | .9   | .7   | .6    | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 242      |
| 12-13        | .0  | .0   | .5   | .4   | .3   | .2   | .2    | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 111      |
| >13          | .0  | .0   | .0   | .2   | .2   | .1   | .1    | *   | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 33       |
| INDET        | 1.6 | 2.6  | 5.1  | 3.2  | 2.9  | 1.4  | 1.1   | .5  | .3    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 975      |
| TOTAL        | 121 | 531  | 1186 | 1129 | 1118 | 566  | 371   | 120 | 104   | 16    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 5214     |
| PCT          | 2.3 | 10.2 | 22.7 | 21.7 | 21.4 | 10.9 | 6.2   | 2.3 | 2.0   | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|----------------|------------|----------------------|------------|
| WNO DIR            | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | *    | .1        | .0   | .0        | .0   | .0              | *    | .1              | .1             | .8                      | 5.0         | .0             | 8.9        | 1.6                  | 83.5       |
| NE                 | *    | .1        | .1   | .0        | .0   | .0              | .0   | .2              | *              | .8                      | 3.8         | .0             | 5.3        | 1.0                  | 88.9       |
| E                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 3.5                     | 1.4         | .0             | 6.3        | .0                   | 88.8       |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 14.8        | .0             | 29.6       | .0                   | 55.6       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 2.7         | .0             | 3.6        | .0                   | 93.8       |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 9.8         | .0             | 8.4        | 3.5                  | 78.3       |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .7                      | 11.3        | .0             | 13.3       | 1.0                  | 73.7       |
| NW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .8                      | 7.9         | .2             | 10.9       | 1.4                  | 78.9       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0             | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 2.9                     | 11.4        | .0             | 5.7        | .0                   | 80.0       |
| TOT PCT            | *    | .1        | *    | .0        | .0   | .0              | *    | .2              | .1             | .8                      | 4.9         | *              | 8.0        | 1.4                  | 84.7       |
| TOT OBS:           | 7825 |           |      |           |      |                 |      |                 |                |                         |             |                |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| PRECIPITATION TYPE |      |              |      |              |      |                      |      |                    |                   | OTHER WEATHER PHENOMENA |                   |                           |               |                                       |                  |
|--------------------|------|--------------|------|--------------|------|----------------------|------|--------------------|-------------------|-------------------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
| HOUR<br>(GMT)      | RAIN | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHR<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME | PCPN PAST<br>HOUR | THOR<br>LTNG            | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 0000               | .1   | .1           | .1   | .0           | .0   | .0                   | .1   | .3                 | .2                | 1.8                     | 4.2               | .0                        | 6.7           | 1.3                                   | 85.7             |
| 0600               | .0   | .1           | *    | .0           | .0   | .0                   | .0   | .1                 | .0                | 1.3                     | 5.2               | .0                        | 5.7           | 1.3                                   | 86.3             |
| 1200               | .0   | .0           | .0   | .0           | .0   | .0                   | .0   | .0                 | .0                | .0                      | 4.5               | .0                        | 8.7           | 1.2                                   | 85.5             |
| 1800               | *    | .2           | .0   | .0           | .0   | .0                   | .0   | .2                 | *                 | .4                      | 5.8               | .0                        | 10.8          | 1.6                                   | 81.1             |
| TOT PCT            | *    | .1           | *    | .0           | .0   | .0                   | *    | .2                 | .1                | .8                      | 5.0               | *                         | 8.0           | 1.4                                   | 84.6             |
| TOT OBS:           | 7901 |              |      |              |      |                      |      |                    |                   |                         |                   |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | 0-3 | WIND SPEED (KNOTS) |       |       |       |    | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|-----|--------------------|-------|-------|-------|----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          |     | 4-10               | 11-21 | 22-33 | 34-47 | 00 |       |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |       |
| N        | .5  | 11.2               | 35.1  | 7.5   | .1    | .0 |       | 54.4      | 15.3     |          | 57.9       | 63.4  | 55.0  | 45.7  | 52.1  | 67.4  | 57.0  | 52.0  |
| NE       | .2  | 6.9                | 24.2  | 5.5   | .1    | .0 |       | 36.9      | 15.6     |          | 32.5       | 27.8  | 36.1  | 46.8  | 39.9  | 26.7  | 34.0  | 39.1  |
| E        | .1  | .4                 | .7    | .2    | .0    | .0 |       | 1.4       | 13.3     |          | 1.1        | .6    | 1.1   | 2.2   | 1.7   | .0    | 1.1   | 1.4   |
| SE       | .0  | .1                 | *     | .0    | .0    | .0 |       | .1        | 10.7     |          | .1         | .0    | .1    | .1    | .1    | .0    | .1    | *     |
| S        | .2  | .1                 | .1    | *     | .0    | .0 |       | .4        | 8.0      |          | .3         | .0    | .6    | .2    | .7    | .0    | .5    | .0    |
| SW       | .1  | .2                 | *     | *     | .0    | .0 |       | .3        | 8.1      |          | .4         | .6    | .4    | .2    | .3    | .0    | .4    | *     |
| W        | .1  | .5                 | .1    | *     | .0    | .0 |       | .8        | 7.7      |          | 1.0        | .0    | .7    | .5    | .6    | .4    | .9    | .8    |
| NW       | .2  | 2.5                | 2.3   | .2    | .0    | .0 |       | 5.3       | 11.1     |          | 6.1        | 5.7   | 5.4   | 4.0   | 4.2   | 5.5   | 5.8   | 6.1   |
| VAR      | .0  | .0                 | .0    | .0    | .0    | .0 |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .4  |                    |       |       |       |    |       | .4        | .0       |          | .6         | 1.9   | .4    | .3    | .4    | .0    | .3    | .7    |
| TOT OBS  | 279 | 3324               | 9503  | 2046  | 33    | 0  | 15185 |           | 15.0     |          | 2884       | 159   | 2940  | 1489  | 3059  | 205   | 3004  | 1445  |
| TOT PCT  | 1.8 | 21.9               | 62.6  | 13.5  | .2    | .0 |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 09    | 15    | 18 |
| N        | 3.0                | 27.4 | 22.8  | 1.2   | *   |           | 54.4     | 15.3     | 58.2       | 51.9  | 53.1  | 55.4  |    |
| NE       | 1.4                | 17.9 | 16.6  | 1.0   | .0  |           | 36.9     | 15.6     | 32.2       | 39.7  | 39.1  | 35.6  |    |
| E        | .3                 | .6   | .4    | *     | .0  |           | 1.4      | 13.3     | 1.1        | 1.5   | 1.6   | 1.2   |    |
| SE       | *                  | .1   | *     | .0    | .0  |           | .1       | 10.7     | .1         | .1    | .1    | .1    |    |
| S        | .2                 | .1   | *     | .0    | .0  |           | .4       | 8.0      | .3         | .5    | .6    | .3    |    |
| SW       | .2                 | .1   | *     | .0    | .0  |           | .3       | 8.1      | .4         | .3    | .3    | .3    |    |
| W        | .4                 | .3   | *     | .0    | .0  |           | .8       | 7.7      | .9         | .6    | .6    | .9    |    |
| NW       | 1.1                | 3.3  | .9    | *     | .0  |           | 5.3      | 11.1     | 6.1        | 4.9   | 4.2   | 5.9   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | .4                 |      |       |       |     |           | .4       | .0       | .7         | .4    | .4    | .4    |    |
| TOT OBS  | 1074               | 7559 | 6202  | 349   | 1   | 15185     |          | 15.0     | 3043       | 4429  | 3264  | 4449  |    |
| TOT PCT  | 7.1                | 49.8 | 40.8  | 2.3   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10  | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|------|-------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |      |       | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | .7   | 1.2  | 23.7  | 61.2               | 12.9  | .3    | .0  | 14.4 | 100.0    | 3043      |
| 06009 | .4   | 1.5  | 22.2  | 61.5               | 14.1  | .2    | .0  | 14.9 | 100.0    | 4429      |
| 12015 | .4   | 1.5  | 20.1  | 62.8               | 15.1  | .2    | .0  | 15.3 | 100.0    | 3264      |
| 18021 | .4   | 1.3  | 21.6  | 64.4               | 12.1  | .2    | .0  | 14.8 | 100.0    | 4449      |
| TOT   | .68  | 2.11 | 39.24 | 95.03              | 20.46 | .33   | .0  | 15.0 |          | 15185     |
| PCT   | .4   | 1.4  | 21.9  | 62.6               | 13.5  | .2    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MFAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
| N        | 41.8 | 7.8  | 9.6  | 4.8           | 2.2          | 2.2                    |
| NE       | 15.8 | 4.4  | 4.8  | 1.8           | 2.5          | 2.5                    |
| E        | .5   | .1   | .1   | *             | 2.0          | 2.0                    |
| SE       | *    | *    | *    | *             | 4.3          | 4.3                    |
| S        | .7   | *    | *    | *             | .9           | .9                     |
| SW       | .3   | .1   | .1   | .1            | 2.5          | 2.5                    |
| W        | .4   | .1   | .1   | .2            | 3.3          | 3.3                    |
| NW       | 3.3  | .7   | 1.2  | .6            | 2.7          | 2.7                    |
| VAR      | .0   | .0   | .0   | .0            | .0           | .0                     |
| CALM     | .3   | *    | *    | .1            | 2.1          | 2.1                    |
| TOT OBS  | 3941 | 825  | 994  | 476           | 6236         | 2.3                    |
| TOT PCT  | 63.2 | 13.2 | 15.9 | 7.6           | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| WIND DIR | 0-2   | 3-4  | 5-7  | 8 &<br>OBS<D | TOTAL<br>OBS | MFAN<br>CLOUD<br>COVER | 000<br>149 | 150<br>299 | 300<br>599 | 400<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH<br>ANY | <5/8<br>HGT | TOTAL<br>OBS |
|----------|-------|------|------|--------------|--------------|------------------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-----------|-------------|--------------|
|          |       |      |      |              |              |                        |            |            |            |            |              |              |              |              |              |       |           |             |              |
| N        | 41.8  | 7.8  | 9.6  | 4.8          | 2.2          |                        | .2         | *          | .2         | 1.0        | 2.5          | 2.0          | .9           | .3           | .2           | 1.3   | 55.2      |             |              |
| NE       | 15.8  | 4.4  | 4.8  | 1.8          | 2.5          |                        | .0         | *          | *          | .3         | 1.5          | 1.4          | .6           | .1           | .1           | .4    | 22.3      |             |              |
| E        | .5    | .1   | .1   | *            | 2.0          |                        | .0         | .0         | .0         | *          | *            | *            | .0           | *            | .0           | .0    | .7        |             |              |
| SE       | *     | *    | *    | *            | 4.3          |                        | *          | .0         | .0         | .0         | .0           | .0           | *            | .0           | .0           | .0    | .1        |             |              |
| S        | .7    | *    | *    | *            | .9           |                        | .0         | *          | .0         | .0         | *            | .0           | *            | .0           | .0           | .0    | .7        |             |              |
| SW       | .3    | .1   | .1   | .1           | 2.5          |                        | .0         | *          | .0         | *          | *            | *            | .0           | *            | .0           | *     | .4        |             |              |
| W        | .4    | .1   | .1   | .2           | 3.3          |                        | .0         | .0         | *          | *          | .1           | *            | *            | .0           | *            | .0    | .6        |             |              |
| NW       | 3.3   | .7   | 1.2  | .6           | 2.7          |                        | .1         | .0         | .0         | .2         | .4           | .3           | .1           | *            | *            | .2    | 4.6       |             |              |
| VAR      | .0    | .0   | .0   | .0           | .0           |                        | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0        |             |              |
| CALM     | .3    | *    | *    | .1           | 2.1          |                        | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .4        |             |              |
| TOT OBS  | 394.1 | 82.5 | 99.6 | 47.6         | 623.6        | 2.3                    | 18         | 4          | 21         | 100        | 286          | 234          | 106          | 29           | 24           | 122   | 5292      |             |              |
| TOT PCT  | 63.2  | 13.2 | 15.9 | 7.6          | 100.0        |                        | .3         | .1         | .3         | 1.6        | 4.6          | 3.8          | 1.7          | .5           | .4           | 2.0   | 84.9      |             | 6236         |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.2         | 2.2        | 2.3        | 2.4        | 2.4          | 2.4          | 2.4           | 2.4        |
| = OR >5000        | 1.6         | 2.7        | 2.8        | 2.8        | 2.8          | 2.8          | 2.8           | 2.8        |
| = OR >3500        | 2.8         | 4.3        | 4.5        | 4.5        | 4.6          | 4.6          | 4.6           | 4.6        |
| = OR >2000        | 5.1         | 7.9        | 8.2        | 8.3        | 8.3          | 8.3          | 8.3           | 8.3        |
| = OR >1000        | 7.8         | 12.0       | 12.7       | 12.8       | 12.8         | 12.9         | 12.9          | 12.9       |
| = OR >600         | 8.6         | 13.4       | 14.3       | 14.4       | 14.4         | 14.5         | 14.5          | 14.5       |
| = OR >300         | 8.7         | 13.6       | 14.6       | 14.7       | 14.7         | 14.8         | 14.8          | 14.8       |
| = OR >150         | 8.7         | 13.6       | 14.7       | 14.8       | 14.8         | 14.8         | 14.9          | 14.9       |
| = OR >0           | 8.7         | 13.7       | 14.8       | 14.9       | 14.9         | 15.0         | 15.2          | 15.2       |
| TOTAL             | 544         | 854        | 927        | 931        | 934          | 937          | 948           | 948        |

TOTAL NUMBER OF OBS: 6253

PCT FREQ NH <5/8: 84.8

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBS CD | TOTAL<br>OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|--------|--------------|
| 53.6 | 11.8 | 7.9 | 6.3 | 4.3 | 3.0 | 3.5 | 3.7 | 5.7 | .2     | 6509         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E  | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .2   | *    | .0 | .0 | *  | .0 | .0  | .1  | .0  | *    | .4    | .4           |
|              | TOT %  | .2   | *    | .0 | .0 | *  | .0 | .0  | .1  | .0  | *    | .4    | .4           |
| 1/2<1        | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | 1.1  | .4   | *  | *  | *  | *  | .0  | .1  | .0  | *    | 1.7   | 1.7          |
|              | TOT %  | 1.1  | .4   | *  | *  | *  | *  | .0  | .1  | .0  | *    | 1.7   | 1.7          |
| 1<2          | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .8   | .5   | .0 | .0 | .0 | .0 | .0  | .1  | .0  | .0   | 1.4   | 1.4          |
|              | TOT %  | .8   | .5   | .0 | .0 | .0 | .0 | .0  | .1  | .0  | .0   | 1.4   | 1.4          |
| 2<5          | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | 3.0  | .8   | .1 | .0 | *  | .1 | .1  | .5  | .0  | .1   | 4.6   | 4.6          |
|              | TOT %  | 3.0  | .8   | .1 | .0 | *  | .1 | .1  | .5  | .0  | .1   | 4.6   | 4.6          |
| 5<10         | PCP    | .1   | .1   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    | .1           |
|              | NO PCP | 22.5 | 8.1  | .2 | *  | .2 | .1 | .4  | 2.2 | .0  | .1   | 33.8  | 33.8         |
|              | TOT %  | 22.6 | 8.1  | .2 | *  | .2 | .1 | .4  | 2.2 | .0  | .1   | 34.0  | 34.0         |
| 10+          | PCP    | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     | *            |
|              | NO PCP | 35.0 | 17.9 | .6 | *  | .5 | .3 | .4  | 2.9 | .0  | .3   | 57.9  | 57.9         |
|              | TOT %  | 35.1 | 17.9 | .6 | *  | .5 | .3 | .4  | 2.9 | .0  | .3   | 57.9  | 57.9         |
| TOT OBS      |        | 7806 |      |    |    |    |    |     |     |     |      |       |              |
| TOT PCT      |        | 62.8 | 27.7 | .9 | .1 | .7 | .5 | 1.0 | 5.9 | .0  | .4   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N     | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *     | .0   | .0  | .0 | *  | *  | .0 | *   | .0  | *    | .1    | .1           |
|              | 4-10       | .1    | *    | .0  | .0 | .0 | .0 | *  | *   | .0  | *    | .1    | .1           |
|              | 11-21      | .1    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | .1    | .1           |
|              | 22+        | .0    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     | *            |
|              | TOT %      | .1    | *    | .0  | .0 | *  | *  | *  | .1  | .0  | *    | .3    | .3           |
| 1/2<1        | 0-3        | *     | .0   | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | *     | *            |
|              | 4-10       | .1    | .1   | *   | *  | *  | *  | *  | *   | .0  | *    | .2    | .2           |
|              | 11-21      | .5    | .2   | *   | .0 | .0 | .0 | .0 | *   | .0  | *    | .8    | .8           |
|              | 22+        | .1    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | .2    | .2           |
|              | TOT %      | .8    | .3   | *   | *  | *  | *  | *  | .1  | .0  | *    | 1.2   | 1.2          |
| 1<2          | 0-3        | .0    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .1    | *    | .0  | .0 | *  | *  | *  | *   | .0  | .0   | .2    | .2           |
|              | 11-21      | .5    | .3   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .8    | .8           |
|              | 22+        | .1    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    | .1           |
|              | TOT %      | .6    | .4   | .0  | .0 | *  | *  | *  | .1  | .0  | .0   | 1.1   | 1.1          |
| 2<5          | 0-3        | *     | *    | .0  | .0 | .0 | .0 | *  | *   | .0  | *    | .1    | .1           |
|              | 4-10       | .5    | .2   | *   | *  | .0 | *  | .1 | .2  | .0  | *    | 1.1   | 1.1          |
|              | 11-21      | 1.8   | .6   | *   | *  | *  | *  | *  | .2  | .0  | *    | 2.7   | 2.7          |
|              | 22+        | .3    | .1   | *   | .0 | .0 | .0 | .0 | *   | .0  | *    | .4    | .4           |
|              | TOT %      | 2.7   | .9   | .1  | *  | *  | *  | .1 | .5  | .0  | *    | 4.3   | 4.3          |
| 5<10         | 0-3        | .2    | *    | .0  | .0 | *  | *  | *  | *   | .0  | .1   | .4    | .4           |
|              | 4-10       | 3.1   | 1.5  | .1  | *  | .1 | .1 | .2 | .9  | .0  | .0   | 5.9   | 5.9          |
|              | 11-21      | 13.4  | 5.7  | .1  | *  | *  | *  | .1 | 1.0 | .0  | *    | 20.2  | 20.2         |
|              | 22+        | 3.3   | 1.7  | *   | .0 | *  | *  | *  | .1  | .0  | *    | 5.1   | 5.1          |
|              | TOT %      | 19.9  | 8.8  | .3  | *  | .1 | .1 | .3 | 1.9 | .0  | .1   | 31.6  | 31.6         |
| 10+          | 0-3        | .2    | .2   | .1  | .0 | .2 | .1 | *  | .1  | .0  | .2   | 1.3   | 1.3          |
|              | 4-10       | 7.5   | 4.0  | .2  | *  | .1 | .1 | .3 | 1.5 | .0  | *    | 13.7  | 13.7         |
|              | 11-21      | 22.0  | 15.2 | .3  | *  | .1 | *  | .1 | 1.2 | .0  | *    | 38.9  | 38.9         |
|              | 22+        | 4.2   | 3.3  | .1  | .0 | *  | *  | *  | .1  | .0  | *    | 7.6   | 7.6          |
|              | TOT %      | 33.9  | 22.6 | .8  | *  | .4 | .2 | .4 | 2.9 | .0  | .2   | 61.4  | 61.4         |
| TOT OBS      |            | 11013 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            | 58.0  | 33.1 | 1.1 | .1 | .5 | .4 | .9 | 5.5 | .0  | .4   | 100.0 |              |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+      | TOTAL       | NM <5/8<br>ANY HGT | TOTAL<br>OBS  |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------|-------------|--------------------|---------------|
| 00003         | .3         | .0         | .2         | .8         | 2.6          | 2.6          | 1.0          | .3           | .3           | 1.5        | 9.6         | 90.4               | 1460          |
| 06009         | .4         | .1         | .8         | 3.2        | 7.7          | 6.0          | 2.8          | .6           | .5           | 1.9        | 23.9        | 76.1               | 1563          |
| 12015         | .3         | .1         | .2         | 1.3        | 4.0          | 4.1          | 1.6          | .4           | .4           | 2.0        | 14.6        | 85.4               | 1711          |
| 18021         | .2         | .0         | .1         | 1.0        | 3.7          | 2.0          | 1.2          | .5           | .3           | 2.4        | 11.4        | 88.6               | 1681          |
| TOT<br>PCT    | 18<br>.3   | 4<br>.1    | 21<br>.3   | 101<br>1.6 | 289<br>4.5   | 236<br>3.7   | 107<br>1.7   | 29<br>.5     | 24<br>.4     | 125<br>1.9 | 954<br>14.9 | 5461<br>85.1       | 6415<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2     | 1/2<1      | 1<2        | 2<5        | 5<10         | 10+          | TOTAL<br>OBS   |
|---------------|----------|------------|------------|------------|--------------|--------------|----------------|
| 00003         | .4       | .9         | .7         | 3.6        | 29.8         | 64.7         | 2346           |
| 06009         | .4       | 1.3        | .9         | 3.7        | 32.6         | 61.1         | 3023           |
| 12015         | .3       | 1.0        | 1.2        | 5.0        | 30.5         | 62.0         | 2607           |
| 18021         | .1       | 1.6        | 1.6        | 4.9        | 33.2         | 58.6         | 3118           |
| TOT<br>PCT    | 34<br>.3 | 134<br>1.2 | 125<br>1.1 | 480<br>4.3 | 3514<br>31.7 | 6807<br>61.4 | 11094<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8), BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS  |
|---------------|---------------|------------|-------------|-----------------|-------------------|---------------|
| 00003         | .4            | .8         | 5.4         | 7.8             | 86.8              | 1419          |
| 06009         | .5            | 1.6        | 8.2         | 18.8            | 72.9              | 1529          |
| 12015         | .3            | .7         | 6.7         | 11.9            | 81.4              | 1662          |
| 18021         | .2            | .5         | 6.7         | 9.4             | 83.9              | 1643          |
| TOT<br>PCT    | 21<br>.3      | 56<br>.9   | 423<br>6.8  | 751<br>12.0     | 5079<br>81.2      | 6253<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | .0    | .1    | .1    | *     | .0     | 20           | .3          |
| 75/79  | .0   | *     | *     | .1    | .4    | .9    | .3    | *      | 118          | 1.9         |
| 70/74  | .0   | .0    | *     | .2    | 2.2   | 8.1   | 5.8   | 2.4    | 1182         | 18.7        |
| 65/69  | .0   | .0    | .0    | *     | 1.1   | 13.8  | 23.0  | 14.5   | 3949         | 62.4        |
| 60/64  | .0   | .0    | .0    | .0    | .1    | 1.4   | 8.1   | 7.1    | 1055         | 16.7        |
| TOTAL  | 0    | 1     | 3     | 26    | 254   | 1537  | 2982  | 1521   | 6324         | 100.0       |
| PCT    | .0   | *     | *     | .4    | 4.0   | 24.3  | 47.2  | 24.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E  | SE | S  | SW | W  | NW  | VAR | CALM |
|-------|------|------|----|----|----|----|----|-----|-----|------|
| 80/84 | .1   | .2   | .1 | *  | .0 | .0 | .0 | .0  | .0  | .0   |
| 75/79 | .9   | .8   | .1 | *  | *  | *  | *  | .1  | .0  | *    |
| 70/74 | 9.8  | 6.1  | .4 | *  | .3 | .3 | .2 | 1.5 | .0  | *    |
| 65/69 | 40.1 | 16.9 | .3 | *  | .2 | .2 | .5 | 3.8 | .0  | .2   |
| 60/64 | 11.9 | 4.1  | *  | .0 | *  | *  | *  | .5  | .0  | *    |
| TOTAL | 62.8 | 28.1 | .9 | .1 | .7 | .5 | .8 | 5.9 | .0  | .3   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 83  | 73  | 70  | 66  | 63 | 61 | 54  | 66.3 | 3034         |
| 06009         | 83  | 73  | 71  | 66  | 63 | 61 | 53  | 66.4 | 4382         |
| 12015         | 86  | 80  | 75  | 69  | 64 | 63 | 55  | 69.3 | 3184         |
| 18021         | 86  | 78  | 75  | 68  | 64 | 63 | 57  | 68.7 | 4359         |
| TOT           | 86  | 77  | 73  | 67  | 63 | 62 | 53  | 67.7 | 14959        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .3    | 1.4   | 12.2  | 48.7  | 37.4   | 86   | 1448         |
| 06009         | .0   | .2    | 1.5   | 15.4  | 48.4  | 34.5   | 86   | 1623         |
| 12015         | .0   | .9    | 8.5   | 37.5  | 42.5  | 10.6   | 80   | 1628         |
| 18021         | .0   | .5    | 4.4   | 30.4  | 49.2  | 15.6   | 82   | 1664         |
| TOT           | 0    | 30    | 256   | 1543  | 3000  | 1534   | 83   | 6363         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1894-1973

MAY

AREA 0006 CAPE BLANC  
20.3N 16.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 4     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | *        | .0       | .1       | .1       | .0       | .0       | 12    | .0       | .2        |
| 11/13              | .0       | .0       | .0       | *        | *        | .2       | .2       | .2       | .0       | 48    | .1       | .6        |
| 9/10               | .0       | .0       | .0       | *        | .2       | .4       | .2       | .1       | .0       | 63    | *        | .9        |
| 7/8                | .0       | .0       | .1       | .3       | 1.2      | .8       | .2       | .0       | .0       | 173   | .1       | 2.3       |
| 6                  | .0       | .0       | .1       | .3       | .9       | .4       | .1       | .0       | .0       | 128   | .1       | 1.7       |
| 5                  | .0       | .0       | .2       | 1.5      | 1.8      | .7       | .1       | *        | *        | 303   | .2       | 4.1       |
| 4                  | .0       | .0       | .3       | 3.0      | 2.8      | .8       | *        | *        | .0       | 484   | .5       | 6.4       |
| 3                  | .0       | .0       | .6       | 4.2      | 3.1      | .5       | *        | .0       | .0       | 672   | .5       | 9.0       |
| 2                  | .0       | .0       | 1.9      | 7.6      | 3.2      | .6       | *        | .0       | .0       | 934   | .8       | 12.4      |
| 1                  | *        | *        | 3.4      | 8.8      | 3.5      | .3       | *        | *        | .0       | 1138  | .7       | 15.5      |
| 0                  | .0       | .0       | 3.8      | 9.6      | 3.5      | .3       | *        | *        | .0       | 1207  | .7       | 16.4      |
| -1                 | .0       | *        | 2.6      | 6.6      | 2.6      | .2       | .0       | .0       | .0       | 848   | .7       | 11.3      |
| -2                 | .0       | *        | 1.5      | 4.3      | .8       | *        | *        | .0       | .0       | 468   | .3       | 6.4       |
| -3                 | .0       | .0       | .7       | 2.2      | .5       | *        | *        | .0       | .0       | 240   | .1       | 3.3       |
| -4                 | .0       | *        | .6       | 1.0      | .2       | *        | *        | .0       | .0       | 138   | .2       | 1.8       |
| -5                 | *        | *        | .3       | .7       | .1       | .0       | .0       | .0       | .0       | 78    | *        | 1.1       |
| -6                 | *        | *        | .1       | .2       | .1       | *        | .0       | .0       | .0       | 29    | *        | .4        |
| -7/-8              | .1       | .0       | .2       | .2       | .1       | .0       | .0       | .0       | .0       | 39    | *        | .5        |
| -9/-10             | *        | .0       | .1       | *        | *        | .0       | .0       | .0       | .0       | 11    | *        | .1        |
| -11/-13            | *        | *        | *        | .1       | *        | .0       | .0       | .0       | .0       | 13    | *        | .2        |
| -14/-16            | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | *         |
| TOTAL              | 10       | 9        | 1169     | 3630     | 1739     | 378      | 63       | 33       | 2        | 7033  | 370      | 6663      |
| PCT                | .1       | .1       | 16.6     | 51.6     | 24.7     | 5.4      | .9       | .5       | *        | 100.0 | 5.3      | 94.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .1  | 1.1  | .1    | .0    | .0    | .0  | 1.3  | *   | .3   | .1    | .0    | .0    | .0  | .4   |
| 1-2     | .3  | 5.2  | .0    | .0    | .0    | .0  | 10.8 | .1  | 2.2  | 2.6   | .0    | .0    | .0  | 4.9  |
| 3-4     | *   | 3.6  | 15.4  | 1.2   | .0    | .0  | 20.2 | *   | 1.3  | 5.1   | .4    | .0    | .0  | 6.9  |
| 5-6     | .0  | .6   | 13.0  | 2.5   | *     | .0  | 16.1 | .0  | .3   | 4.2   | 1.1   | .0    | .0  | 5.6  |
| 7       | .0  | .2   | 7.2   | 2.5   | .0    | .0  | 9.9  | .0  | .1   | 2.4   | 1.2   | .0    | .0  | 3.6  |
| 8-9     | .0  | .1   | 2.3   | 2.2   | .1    | .0  | 4.7  | .0  | .1   | .7    | .9    | *     | .0  | 1.7  |
| 10-11   | .0  | .0   | .4    | 1.0   | .0    | .0  | 1.4  | .0  | .0   | .3    | .6    | .0    | .0  | .8   |
| 12      | .0  | .0   | .1    | .3    | .0    | .0  | .4   | .0  | .0   | .1    | .4    | .0    | .0  | .5   |
| 13-16   | .0  | .0   | *     | .2    | *     | .0  | .2   | .0  | .0   | *     | .1    | *     | .0  | .2   |
| 17-19   | .0  | .0   | .1    | *     | .0    | .0  | .1   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *     | .0    | .0    | .0  | *    |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 10.8 | 43.8  | 9.9   | .1    | .0  | 65.1 | .2  | 4.2  | 15.6  | 4.7   | .1    | .0  | 24.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | *    | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | *    | .2    | *     | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .2   | .3    | .1    | .0    | .0  | .5  | .0  | *    | *     | .0    | .0    | .0  | .1  |



PERIOD: (OVER-ALL) 1963-1973

MAY  
TABLE 18 (CONT)

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20.3N 18.1W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 5-6     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | .1   | .0    | .0    | .0    | .0  | .0  | .0        |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .0  | .3   | .2    | .0    | .0    | .0  | 1.1 | .2  | .3   | .1    | .0    | .0    | .0  | .0  | .6        |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3  | .3  | .5   | .0    | .0    | .0    | .0  | .8  | .8        |
| 1-2     | .0  | .3   | .1    | .0    | .0    | .0  | .4  | .1  | 1.4  | .6    | .0    | .0    | .0  | 2.1 | 2.1       |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .9   | 1.0   | .0    | .0    | .0  | 1.9 | 1.9       |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .7    | .1    | .0    | .0  | .9  | .9        |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .5   | .1    | .0    | .0    | .0  | .5  | .5        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .1        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .1  | .6   | .2    | .0    | .0    | .0  | .9  | .4  | 2.8  | 3.0   | .2    | .0    | .0  | 6.4 | 99.4      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.2 | 2.1  | .3    | .0    | .0    | .0  | 3.6   |         |
| 1-2     | 1.3 | 9.4  | 8.6   | .0    | .0    | .0  | 19.3  |         |
| 3-4     | .1  | 6.0  | 21.7  | 1.7   | .0    | .0  | 29.4  |         |
| 5-6     | .0  | 1.3  | 18.1  | 3.7   | .0    | .0  | 23.1  |         |
| 7       | .0  | .3   | 10.0  | 3.8   | .0    | .0  | 14.2  |         |
| 8-9     | .0  | .2   | 3.2   | 3.1   | .1    | .0  | 6.6   |         |
| 10-11   | .0  | .0   | .7    | 1.6   | .0    | .0  | 2.3   |         |
| 12      | .0  | .0   | .1    | .7    | .0    | .0  | .9    |         |
| 13-16   | .0  | .0   | .0    | .3    | .1    | .0  | .4    |         |
| 17-19   | .0  | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.6 | 19.3 | 62.9  | 15.0  | .2    | .0  | 100.0 | 4104    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .8  | 6.1  | 10.4 | 7.6  | 4.0  | 1.9  | .8    | .2  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1596  | 4        |
| 6-7          | .0  | .9   | 5.4  | 8.4  | 6.9  | 4.6  | 2.0   | .6  | .4    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1470  | 6        |
| 8-9          | .0  | .3   | 1.7  | 3.2  | 3.9  | 2.3  | 1.5   | .0  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 721   | 7        |
| 10-11        | .0  | .4   | .4   | .9   | .8   | .6   | .5    | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 269   | 7        |
| 12-13        | .0  | .0   | .5   | .4   | .3   | .2   | .2    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 97    | 7        |
| >13          | .0  | .0   | .0   | .2   | .1   | .1   | .0    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 31    | 9        |
| INDET        | .8  | 3.4  | 4.1  | 4.0  | 2.6  | 1.6  | .7    | .2  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 886   | 5        |
| TOTAL        | 82  | 558  | 1124 | 1241 | 932  | 565  | 296   | 127 | 82    | 9     | 4     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 5010  | 5        |
| PCT          | 1.6 | 11.1 | 22.4 | 24.8 | 18.6 | 11.3 | 5.7   | 2.5 | 1.6   | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| N        | .1                 | *         | .1   | .0        | .0   | .0              | .0   | .2                      | *              | .3        | 7.8         | .0                  | 9.9        | 2.3             | 79.4       |
| NE       | *                  | .1        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .5        | 4.4         | .0                  | 7.8        | 1.1             | 85.9       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 1.5       | .0          | .0                  | 6.1        | .0              | 92.3       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | 23.5            | 76.5       |
| S        | 4.3                | .0        | .0   | .0        | .0   | .0              | .0   | 4.3                     | .0             | .0        | .0          | 4.3                 | 4.3        | 3.2             | 83.9       |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 19.4        | .0                  | 9.3        | 3.9             | 67.4       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 1.2       | 7.2         | 1.2                 | 10.9       | 4.7             | 74.8       |
| NW       | .1                 | .3        | .0   | .0        | .0   | .0              | .0   | .3                      | .0             | .3        | 8.8         | .2                  | 8.3        | 3.4             | 78.6       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 20.4        | .0                  | .0         | 2.0             | 77.6       |
| TOT PCT  | .1                 | *         | .1   | .0        | .0   | .0              | .0   | .2                      | *              | .4        | 7.0         | *                   | 9.2        | 2.1             | 81.1       |
| TOT OBS: | 7531               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WU PCPN | FGG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG SNOW | NO SIG WEA |
| 00003      | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .2                      | .1             | .6        | 5.3         | .0                  | 7.8        | 2.1             | 83.8       |
| 06009      | .1                 | .1        | .2   | .0        | .0   | .0              | .0   | .4                      | .0             | .9        | 7.3         | .1                  | 7.3        | 1.5             | 82.5       |
| 12015      | .1                 | .0        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .0        | 6.9         | .1                  | 9.3        | 1.9             | 81.6       |
| 18021      | .2                 | .0        | .0   | .0        | .0   | .0              | .0   | .2                      | .1             | .2        | 8.6         | .1                  | 11.9       | 2.6             | 76.6       |
| TOT PCT    | .1                 | *         | .1   | .0        | .0   | .0              | .0   | .2                      | .1             | .4        | 7.1         | .1                  | 9.1        | 2.1             | 81.0       |
| TOT OBS:   | 7608               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .5                 | 11.1 | 35.0  | 8.7   | .1    | .0  |       | 55.4      | 15.5     |          | 58.7       | 67.3  | 55.2  | 47.4  | 52.9  | 72.7  | 59.0  | 52.1  |
| NE       | .3                 | 6.5  | 24.0  | 5.4   | .1    | .0  |       | 36.4      | 15.6     |          | 32.0       | 24.3  | 37.2  | 40.4  | 38.7  | 20.5  | 32.8  | 39.1  |
| E        | .1                 | .4   | .6    | .1    | *     | .0  |       | 1.2       | 13.4     |          | 1.0        | .0    | 1.1   | 1.6   | 1.5   | .5    | .9    | 1.3   |
| SE       | *                  | .1   | *     | .0    | .0    | .0  |       | .1        | 8.1      |          | *          | .0    | .2    | .2    | .1    | .5    | *     | *     |
| S        | *                  | .1   | .1    | *     | .0    | .0  |       | .2        | 11.7     |          | .2         | .0    | .2    | .2    | .4    | .0    | .2    | .1    |
| SW       | .1                 | .2   | .1    | *     | .0    | .0  |       | .4        | 9.3      |          | .4         | .6    | .3    | .3    | .4    | .4    | .4    | .5    |
| W        | .1                 | .5   | .1    | *     | .0    | .0  |       | .8        | 7.9      |          | 1.0        | .0    | .7    | .4    | .8    | 1.1   | 1.2   | .6    |
| NW       | .3                 | 2.0  | 2.3   | .4    | *     | .0  |       | 4.9       | 11.9     |          | 5.5        | 6.7   | 4.5   | 3.3   | 4.7   | 4.3   | 5.3   | 5.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .5                 |      |       |       |       |     |       | .5        | .0       |          | 1.1        | 1.1   | .7    | .3    | .5    | .0    | .2    | .4    |
| TOT OBS  | 299                | 3104 | 9218  | 2184  | 31    | 0   | 14836 |           | 15.2     |          | 2887       | 175   | 2800  | 1444  | 3009  | 188   | 2879  | 1454  |
| TOT PCT  | 2.0                | 20.9 | 62.1  | 14.7  | .2    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |          | 41+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|--------------------|------|-------|-------|----------|-------|--------------|-------------|-------------|------------|----------|----------|--|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 00<br>03 |       |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 3.1                | 26.2 | 24.6  | 1.4   | *        |       | 55.4         | 15.5        | 59.2        | 52.5       | 54.0     | 56.7     |  |
| NE       | 1.6                | 17.0 | 16.9  | .8    | .0       |       | 36.4         | 15.6        | 31.6        | 40.3       | 37.6     | 34.9     |  |
| E        | .2                 | .5   | .4    | *     | *        |       | 1.2          | 13.4        | 1.0         | 1.2        | 1.5      | 1.0      |  |
| SE       | .1                 | *    | *     | .0    | .0       |       | .1           | 8.1         | *           | .2         | .1       | *        |  |
| S        | .1                 | .1   | *     | *     | .0       |       | .2           | 11.7        | .2          | .2         | .4       | .2       |  |
| SW       | .2                 | .2   | .1    | *     | .0       |       | .4           | 9.3         | .4          | .3         | .4       | .4       |  |
| W        | .4                 | .4   | *     | .0    | .0       |       | .8           | 7.9         | .9          | .6         | .8       | 1.0      |  |
| NW       | 1.0                | 2.8  | 1.1   | *     | .0       |       | 4.9          | 11.9        | 5.6         | 4.1        | 4.7      | 5.5      |  |
| VAR      | .0                 | .0   | .0    | .0    | .0       |       | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | .5                 |      |       |       |          |       | .5           | .0          | 1.1         | .5         | .4       | .3       |  |
| TOT OBS  | 1055               | 7019 | 6412  | 347   | 3        | 14836 |              | 15.2        | 3062        | 4244       | 3197     | 4333     |  |
| TOT PCT  | 7.1                | 47.3 | 43.2  | 2.3   | *        |       | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

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AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | 0-2  | 3-4 | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>COVER |
|----------|------|-----|------|---------------|--------------|---------------|
| N        | 45.5 | 5.0 | 7.9  | 7.1           | 2.0          |               |
| NE       | 15.0 | 2.8 | 4.2  | 2.7           | 2.5          |               |
| E        | .5   | .1  | .2   | .1            | 2.4          |               |
| SE       | *    | *   | *    | *             | 4.1          |               |
| S        | .2   | *   | .1   | *             | 2.7          |               |
| SW       | .2   | *   | .1   | .1            | 3.2          |               |
| W        | .4   | .1  | .1   | .4            | 4.3          |               |
| NW       | 4.0  | .6  | 1.0  | 1.0           | 2.7          |               |
| VAR      | .0   | .0  | .0   | .0            | .0           |               |
| CALM     | .6   | *   | *    | .1            | 1.3          |               |
| TOT OBS  | 4037 | 525 | 819  | 694           | 6075         | 2.2           |
| TOT PCT  | 66.5 | 8.6 | 13.5 | 11.4          | 100.0        |               |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4 | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>COVER |
|----------|------|-----|------|---------------|--------------|---------------|
| N        | 45.5 | 5.0 | 7.9  | 7.1           | 2.0          |               |
| NE       | 15.0 | 2.8 | 4.2  | 2.7           | 2.5          |               |
| E        | .5   | .1  | .2   | .1            | 2.4          |               |
| SE       | *    | *   | *    | *             | 4.1          |               |
| S        | .2   | *   | .1   | *             | 2.7          |               |
| SW       | .2   | *   | .1   | .1            | 3.2          |               |
| W        | .4   | .1  | .1   | .4            | 4.3          |               |
| NW       | 4.0  | .6  | 1.0  | 1.0           | 2.7          |               |
| VAR      | .0   | .0  | .0   | .0            | .0           |               |
| CALM     | .6   | *   | *    | .1            | 1.3          |               |
| TOT OBS  | 4037 | 525 | 819  | 694           | 6075         | 2.2           |
| TOT PCT  | 66.5 | 8.6 | 13.5 | 11.4          | 100.0        |               |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------------------|--------------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                     |              |
| .5  | *   | .3  | 1.6 | 2.8  | 2.2  | 1.1  | .4   | .3   | 1.4   | 54.6                |              |
| *   | .1  | 1.0 | 1.7 | 1.3  | .5   | .3   | .1   | .4   | 19.3  |                     |              |
| .0  | .0  | .0  | *   | .1   | *    | *    | *    | .0   | *     | .7                  |              |
| .0  | .0  | .0  | .0  | *    | .0   | .0   | .0   | .0   | .0    | .1                  |              |
| .0  | .0  | *   | *   | .0   | *    | .0   | *    | .0   | .0    | .2                  |              |
| *   | .0  | *   | *   | .0   | *    | .0   | *    | .0   | .0    | .4                  |              |
| .0  | .0  | *   | .1  | .1   | .1   | *    | *    | .0   | .0    | .7                  |              |
| *   | .0  | .1  | .1  | .4   | .3   | .1   | *    | *    | .1    | 5.4                 |              |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                  |              |
| *   | .0  | .0  | .0  | .0   | *    | *    | .0   | .0   | .0    | .6                  |              |
| .6  | 3   | 32  | 173 | 310  | 248  | 107  | 49   | 27   | 118   | 4972                | 6075         |
| .6  | *   | .5  | 2.8 | 5.1  | 4.1  | 1.8  | .8   | .4   | 1.9   | 81.8                | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING<br>(FEET) | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | VSBY (NM)<br>= OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
|-------------------|-------------|------------|------------|-------------------------|--------------|--------------|---------------|------------|
| = OR >6500        | .8          | 1.9        | 2.4        | 2.4                     | 2.4          | 2.4          | 2.4           | 2.4        |
| = OR >5000        | 1.3         | 2.6        | 3.2        | 3.2                     | 3.2          | 3.2          | 3.2           | 3.2        |
| = OR >3500        | 2.2         | 4.3        | 5.0        | 5.0                     | 5.0          | 5.0          | 5.0           | 5.0        |
| = OR >2000        | 4.3         | 8.0        | 9.1        | 9.1                     | 9.1          | 9.1          | 9.1           | 9.1        |
| = OR >1000        | 6.8         | 12.5       | 14.0       | 14.0                    | 14.1         | 14.1         | 14.1          | 14.1       |
| = OR >600         | 7.7         | 14.8       | 16.8       | 16.9                    | 16.9         | 16.9         | 17.0          | 17.0       |
| = OR >300         | 7.9         | 15.2       | 17.4       | 17.4                    | 17.5         | 17.5         | 17.5          | 17.5       |
| = OR >150         | 8.0         | 15.2       | 17.4       | 17.5                    | 17.5         | 17.5         | 17.5          | 17.5       |
| = OR >0           | 8.0         | 15.4       | 17.8       | 17.9                    | 18.0         | 18.1         | 18.1          | 18.1       |
| TOTAL             | 486         | 935        | 1084       | 1088                    | 1095         | 1099         | 1104          | 1104       |

TOTAL NUMBER OF OBS: 6088

PCT FREQ NH < 5/8: 81.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBS CD | TOTAL<br>OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|--------|--------------|
| 56.5 | 10.3 | 6.1 | 4.7 | 3.1 | 2.6 | 3.5 | 4.3 | 8.5 | .5     | 6352         |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E  | SE | S  | SW | W  | NW  | VAR | CALM | PCT | TOTAL<br>OBS                              |
|--------------|--------|------|------|----|----|----|----|----|-----|-----|------|-----|---|
| <1/2         | PCP    | *    | .0   | .0 | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *   | .2  |
|              | NO PCP | .1   | .0   | .0 | .0 | *  | .0 | *  | .0  | .0  | *    | *   |   |
|              | TOT %  | .1   | .0   | .0 | .0 | *  | .0 | *  | .0  | .0  | *    | *   |   |
| 1/2<1        | PCP    | *    | .0   | .0 | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *   | 1.8                                       |
|              | NO PCP | 1.3  | .3   | .0 | .0 | .0 | *  | .0 | .2  | .0  | *    | *   |   |
|              | TOT %  | 1.3  | .3   | .0 | .0 | .0 | *  | .0 | .2  | .0  | *    | *   |   |
| 1<2          | PCP    | *    | .0   | .0 | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *   | 1.6                                       |
|              | NO PCP | 1.1  | .4   | .0 | *  | .0 | *  | .0 | .1  | .0  | *    | *   |   |
|              | TOT %  | 1.1  | .4   | .0 | *  | .0 | *  | .0 | .1  | .0  | *    | *   |   |
| 2<5          | PCP    | *    | *    | .0 | .0 | .0 | .0 | *  | .0  | .0  | .0   | *   | 7.9                                       |
|              | NO PCP | 5.9  | 1.1  | *  | *  | *  | *  | .1 | .6  | .0  | *    | *   |   |
|              | TOT %  | 5.9  | 1.1  | *  | *  | *  | *  | .1 | .6  | .0  | *    | *   |   |
| 5<10         | PCP    | .1   | *    | .0 | .0 | .0 | .0 | *  | .0  | .0  | .0   | .1  | 39.0                                      |
|              | NO PCP | 25.3 | 9.7  | .3 | *  | .1 | .1 | .5 | 2.6 | .0  | .2   | *   |   |
|              | TOT %  | 25.3 | 9.8  | .3 | *  | .1 | .1 | .5 | 2.6 | .0  | .2   | *   |   |
| 10+          | PCP    | .0   | .0   | .0 | .0 | *  | .0 | .0 | .0  | .0  | .0   | *   | 49.4                                      |
|              | NO PCP | 30.4 | 14.6 | .5 | .1 | .1 | .2 | .4 | 2.8 | .0  | .3   | *   |   |
|              | TOT %  | 30.4 | 14.6 | .5 | .1 | .2 | .2 | .4 | 2.8 | .0  | .3   | *   |   |
| TOT OBS      |        |      |      |    |    |    |    |    |     |     |      |     | 7514                                      |
| TOT PCT      |        |      |      |    |    |    |    |    |     |     |      |     | 64.1 26.1 .9 .1 .3 .4 1.0 6.4 .0 .7 100.0 |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E  | SE | S  | SW | W   | NW  | VAR | CALM | PCT  | TOTAL<br>OBS                              |
|--------------|------------|------|------|----|----|----|----|-----|-----|-----|------|------|---|
| <1/2         | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  | *    | *    | .1  |
|              | 4-10       | .1   | .0   | .0 | .0 | *  | .0 | *   | .0  | .0  |      |      |   |
|              | 11-21      | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  |      |      |   |
|              | 22+        | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0  |      |      |   |
|              | TOT %      | .1   | .0   | .0 | .0 | .0 | *  | *   | .0  | .0  | *    | *    |   |
| 1/2<1        | 0-3        | .0   | .0   | .0 | .0 | .0 | .0 | *   | *   | .0  | *    | *    | .4  |
|              | 4-10       | .3   | *    | .0 | .0 | .0 | *  | .0  | .1  | .0  |      |      |   |
|              | 11-21      | .6   | .1   | .0 | .0 | .0 | .0 | .0  | .1  | .0  |      |      |   |
|              | 22+        | .1   | .1   | .0 | .0 | .0 | .0 | .0  | *   | .0  |      |      |   |
|              | TOT %      | 1.0  | .2   | .0 | .0 | .0 | *  | *   | .1  | .0  | *    | *    |   |
| 1<2          | 0-3        | *    | .0   | .0 | .0 | .0 | .0 | *   | *   | .0  | *    | *    | 1.0                                       |
|              | 4-10       | .1   | *    | *  | *  | *  | *  | .1  | .0  | .0  |      |      |   |
|              | 11-21      | .7   | .2   | .0 | *  | .0 | .0 | .0  | *   | .0  |      |      |   |
|              | 22+        | .2   | .1   | .0 | .0 | .0 | .0 | .0  | *   | .0  |      |      |   |
|              | TOT %      | .9   | .3   | *  | *  | *  | *  | *   | .1  | .0  | *    | *    |   |
| 2<5          | 0-3        | .1   | *    | .0 | .0 | .0 | *  | *   | *   | .0  | .1   | .3   | 1.5                                       |
|              | 4-10       | .9   | .2   | *  | .0 | .0 | *  | .1  | .2  | .0  |      |      |   |
|              | 11-21      | 3.1  | .9   | *  | *  | *  | *  | .0  | .3  | .0  |      |      |   |
|              | 22+        | .9   | .4   | *  | .0 | .0 | .0 | .0  | *   | .0  |      |      |   |
|              | TOT %      | 5.0  | 1.5  | *  | *  | *  | .1 | .1  | .5  | .0  | .1   | .7   |   |
| 5<10         | 0-3        | .2   | .1   | *  | *  | .0 | *  | .1  | .1  | .0  | .2   | .8   | 7.7                                       |
|              | 4-10       | 4.3  | 1.9  | .1 | *  | .1 | .1 | .4  | .8  | .0  |      |      |   |
|              | 11-21      | 14.6 | 7.0  | .1 | *  | *  | *  | 1.2 | .0  |     |      |      |   |
|              | 22+        | 3.8  | 2.2  | *  | .0 | *  | *  | *   | .2  | .0  |      |      |   |
|              | TOT %      | 22.9 | 11.2 | .4 | *  | .1 | .1 | .5  | 2.3 | .0  | .2   | 37.7 |   |
| 10+          | 0-3        | .3   | .2   | .1 | *  | *  | *  | .1  | .2  | .0  | .2   | 1.1  | 11.0                                      |
|              | 4-10       | 5.9  | 3.5  | .2 | *  | *  | .1 | .2  | 1.1 | .0  |      |      |   |
|              | 11-21      | 19.1 | 12.6 | .3 | *  | *  | .1 | .1  | 1.1 | .0  |      |      |   |
|              | 22+        | 4.2  | 2.2  | *  | .0 | *  | *  | *   | .1  | .0  |      |      |   |
|              | TOT %      | 29.5 | 18.5 | .5 | *  | .1 | .2 | .4  | 2.5 | .0  | .2   | 51.9 |   |
| TOT OBS      |            |      |      |    |    |    |    |     |     |     |      |      | 10512                                     |
| TOT PCT      |            |      |      |    |    |    |    |     |     |     |      |      | 59.4 31.7 .9 .1 .3 .4 1.1 5.5 .0 .6 100.0 |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

JUNE

TABLE 10

AREA 0006 CAPE BLANC  
20.3N 18.1W

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+      | TOTAL        | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|---------------------|---------------|
| 00003          | .5         | .0         | .5         | 1.6        | 2.7          | 3.0          | .9           | .4           | .2           | 1.7        | 11.5         | 88.5                | 1505          |
| 06009          | .7         | .1         | 1.1        | 4.8        | 8.4          | 5.3          | 2.7          | .9           | .6           | 2.3        | 27.0         | 73.0                | 1444          |
| 12015          | .8         | .1         | .3         | 2.9        | 5.5          | 4.9          | 2.0          | .9           | .6           | 1.8        | 19.7         | 80.3                | 1718          |
| 18021          | .3         | .1         | .3         | 2.0        | 3.3          | 2.7          | 1.5          | 1.1          | .3           | 1.8        | 13.3         | 86.7                | 1568          |
| TOT<br>PCT     | 36<br>.6   | 3<br>*     | 33<br>.5   | 174<br>2.8 | 310<br>5.0   | 249<br>4.0   | 109<br>1.7   | 51<br>.8     | 27<br>.4     | 119<br>1.9 | 1111<br>17.8 | 9124<br>82.2        | 6235<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 1.0   | .6  | 5.9 | 36.4 | 56.0 | 2339         |
| 06009          | .2   | 1.4   | 1.6 | 6.3 | 38.4 | 52.1 | 2831         |
| 12015          | .3   | 1.0   | 1.6 | 9.8 | 36.3 | 50.9 | 2493         |
| 18021          | .1   | 2.0   | 1.8 | 7.6 | 39.6 | 49.0 | 2927         |
| TOT            | 17   | 149   | 153 | 782 | 4002 | 5487 | 10590        |
| PCT            | .2   | 1.4   | 1.4 | 7.4 | 37.8 | 51.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .5            | 1.1        | 7.6         | 8.5             | 84.0               | 1467         |
| 06009          | .7            | 2.2        | 13.6        | 19.0            | 67.5               | 1408         |
| 12015          | .8            | 1.4        | 14.6        | 13.7            | 71.7               | 1670         |
| 18021          | .3            | .8         | 11.7        | 9.3             | 79.1               | 1543         |
| TOT            | 36            | 83         | 726         | 763             | 4599               | 6088         |
| PCT            | .6            | 1.4        | 11.9        | 12.5            | 75.5               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | *     | .0    | *     | .0    | .0    | .0     | 2            | *           |
| 80/84  | .0   | .0    | .0    | *     | .1    | .1    | .1    | *      | 27           | 4.4         |
| 75/79  | .0   | .0    | *     | .1    | .8    | 2.4   | .9    | .3     | 271          | 4.5         |
| 70/74  | .0   | .0    | *     | *     | 1.1   | 11.1  | 15.3  | 6.2    | 2031         | 33.7        |
| 65/69  | .0   | .0    | .0    | .0    | .2    | 5.2   | 31.8  | 19.2   | 3397         | 56.4        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .1    | 1.7   | 3.1    | 295          | 4.9         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | *     | *      | 2            | *           |
| TOTAL  | 0    | 0     | 4     | 9     | 136   | 1137  | 3004  | 1735   | 6025         | 100.0       |
| PCT    | .0   | .0    | .1    | .1    | 2.3   | 18.9  | 49.9  | 28.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E  | SE | S  | SW | W   | NW  | VAR | CALM |
|-------|------|------|----|----|----|----|-----|-----|-----|------|
| 85/89 | *    | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 80/84 | .2   | .1   | .1 | *  | .0 | .0 | *   | *   | .0  | .0   |
| 75/79 | 2.4  | 1.4  | *  | *  | *  | *  | .1  | .4  | .0  | *    |
| 70/74 | 19.5 | 9.9  | .3 | *  | .2 | .2 | .4  | 3.1 | .0  | .1   |
| 65/69 | 38.1 | 14.3 | .3 | *  | *  | .2 | .4  | 2.6 | .0  | .4   |
| 60/64 | 3.4  | 1.2  | *  | .0 | .0 | .0 | .0  | .2  | .0  | *    |
| 55/59 | *    | *    | .0 | .0 | .0 | .0 | *   | .0  | .0  | .0   |
| TOTAL | 63.7 | 26.8 | .8 | .1 | .2 | .4 | 1.0 | 6.5 | .0  | .6   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 86  | 75  | 72  | 68  | 64 | 63 | 56  | 68.7 | 3053         |
| 06009          | 83  | 75  | 73  | 68  | 64 | 62 | 59  | 68.1 | 4227         |
| 12015          | 88  | 81  | 77  | 71  | 66 | 64 | 58  | 70.9 | 3136         |
| 18021          | 85  | 80  | 76  | 70  | 65 | 64 | 56  | 70.4 | 4235         |
| TOT            | 88  | 79  | 75  | 69  | 64 | 63 | 56  | 69.3 | 14651        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .1    | .7    | 9.8   | 48.2  | 41.3   | 87   | 1466         |
| 06009          | .0   | .1    | .9    | 7.4   | 48.6  | 43.0   | 88   | 1501         |
| 12015          | .0   | .4    | 4.0   | 33.7  | 47.5  | 14.5   | 81   | 1548         |
| 18021          | .0   | .3    | 3.4   | 23.9  | 54.5  | 17.9   | 83   | 1555         |
| TOT            | 0    | 13    | 138   | 1146  | 3018  | 1755   | 85   | 6070         |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | 3     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | .1       | .1       | *        | 17    | *        | .2        |
| 11/13              | .0       | .0       | .0       | *        | *        | .1       | .3       | .1       | .0       | 43    | *        | .6        |
| 9/10               | .0       | .0       | .0       | *        | .3       | .5       | .4       | .1       | *        | 86    | .2       | 1.1       |
| 7/8                | .0       | .0       | .0       | .2       | .9       | 1.2      | .2       | .1       | .0       | 179   | .3       | 2.3       |
| 6                  | .0       | .0       | *        | .2       | .9       | .7       | .2       | *        | .0       | 143   | .2       | 1.9       |
| 5                  | .0       | .0       | .0       | 1.2      | 2.6      | 1.1      | .3       | *        | .0       | 349   | .5       | 4.7       |
| 4                  | .0       | .0       | .1       | 2.0      | 3.1      | 1.0      | .2       | *        | .0       | 434   | .4       | 6.0       |
| 3                  | .0       | .0       | .2       | 4.1      | 3.7      | 1.4      | .1       | *        | .0       | 640   | .7       | 8.8       |
| 2                  | .0       | *        | .6       | 6.7      | 4.5      | 1.5      | .1       | *        | .0       | 907   | .8       | 12.6      |
| 1                  | .0       | *        | 1.1      | 8.2      | 5.2      | 1.2      | .1       | *        | .0       | 1072  | 1.2      | 14.8      |
| 0                  | .0       | .0       | 1.2      | 8.0      | 6.2      | 1.0      | .1       | .1       | .0       | 1112  | 1.2      | 15.3      |
| -1                 | .0       | .0       | .7       | 5.2      | 4.5      | .6       | *        | *        | .0       | 746   | .6       | 10.5      |
| -2                 | .0       | *        | .6       | 3.0      | 2.5      | .3       | *        | .0       | .0       | 435   | .7       | 5.8       |
| -3                 | .0       | .0       | .3       | 1.5      | 1.2      | .2       | *        | *        | .0       | 211   | .2       | 3.0       |
| -4                 | .0       | .0       | .4       | 1.1      | .7       | .1       | *        | .0       | .0       | 158   | .3       | 2.1       |
| -5                 | .0       | .0       | .2       | .6       | .4       | *        | .0       | .0       | .0       | 88    | .1       | 1.2       |
| -6                 | .0       | *        | .1       | .2       | .2       | .0       | .0       | .0       | .0       | 34    | *        | .5        |
| -7/-8              | *        | *        | .1       | .5       | .2       | *        | .0       | .0       | .0       | 55    | *        | .8        |
| -9/-10             | *        | *        | .0       | .1       | .1       | *        | .0       | .0       | .0       | 17    | .0       | .3        |
| -11/-13            | .0       | .0       | .1       | *        | .0       | .0       | .0       | .0       | .0       | 7     | .0       | .1        |
| -14/-16            | .0       | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| -17/-19            | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 2        | 9        | 382      | 2894     | 2509     | 747      | 145      | 47       | 3        | 6738  | 504      | 6234      |
| PCT                | *        | .1       | 5.7      | 43.0     | 37.2     | 11.1     | 2.2      | .7       | *        | 100.0 | 7.5      | 92.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | 1.9  | .2    | .0    | .0    | .0  | 2.4  | .1  | .4   | .1    | .0    | .0    | .0  | .6   |
| 1-2     | .2  | 5.7  | 6.5   | .0    | .0    | .0  | 17.3 | .1  | 1.7  | 2.3   | .0    | .0    | .0  | 4.1  |
| 3-4     | *   | 4.6  | 14.5  | 1.5   | .0    | .0  | 20.6 | .0  | 1.2  | 4.8   | .4    | .0    | .0  | 8.4  |
| 5-6     | *   | .9   | 12.6  | 3.1   | .0    | .0  | 16.6 | .0  | .3   | 5.1   | .8    | .0    | .0  | 8.2  |
| 7       | .0  | .1   | 6.0   | 3.2   | *     | .0  | 9.4  | .0  | *    | 2.3   | 1.1   | *     | .0  | 3.5  |
| 8-9     | .0  | *    | 1.8   | 1.8   | *     | .0  | 3.7  | *   | .0   | .5    | .5    | .0    | .0  | 1.1  |
| 10-11   | .0  | *    | .6    | .9    | *     | .0  | 1.5  | .0  | .0   | .2    | .3    | .0    | .0  | .5   |
| 12      | .0  | .0   | .1    | .5    | .0    | .0  | .6   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .6  | 13.3 | 42.3  | 11.1  | .1    | .0  | 67.3 | .2  | 3.7  | 15.3  | 3.4   | *     | .0  | 22.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .1   | *     | .0    | .0    | .0  | .2  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 3-4     | .0  | .1   | *     | *     | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 5-6     | .0  | *    | .1    | *     | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .2   | .2    | .1    | .0    | .0  | .5  | .0  | *    | *     | .0    | .0    | .0  | .1  |



PERIOD: (OVER-ALL) 1963-1973

JUNE

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .0   | .0    | .0    | .0    | .0  | *   | *   | .0   | .0    | .0    | .0    | .0  | *   |
| 1-2     | *   | *    | .0    | .0    | .0    | .0  | .1  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | *    | .1    | *     | .0    | .0  | .1  | .0  | *    | *     | *     | .0    | .0  | .1  |
| 5-6     | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .1   | .1    | .1    | .0    | .0  | .3  | *   | .2   | *     | *     | .0    | .0  | .3  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | .1   | *     | .0    | .0    | .0  | .2  | .2  | .3   | *     | .0    | .0    | .0  | .6  |           |
| 1-2     | .1  | .3   | .1    | .0    | .0    | .0  | .5  | .1  | 1.8  | .9    | .0    | .0    | .0  | 2.7 |           |
| 3-4     | *   | .1   | .1    | .0    | .0    | .0  | .2  | *   | .4   | 1.9   | *     | .0    | .0  | 2.3 |           |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | .1  | *   | .1   | .6    | .1    | .0    | .0  | .7  |           |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .3   | .1    | .0    | .0    | .0  | .4  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .1    | .0    | .0  | .2  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | .6   | .3    | .0    | .0    | .0  | 1.0 | .4  | 2.5  | 3.7   | .4    | .0    | .0  | 7.0 | 99.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.8 | 2.8  | .4    | .0    | .0    | .0  | 5.0   |         |
| 1-2     | .5  | 9.9  | 9.7   | .0    | .0    | .0  | 20.1  |         |
| 3-4     | .1  | 6.3  | 21.4  | 2.0   | .0    | .0  | 29.8  |         |
| 5-6     | *   | 1.4  | 18.3  | 4.0   | .0    | .0  | 23.7  |         |
| 7       | .0  | .2   | 8.7   | 4.4   | .1    | .0  | 13.4  |         |
| 8-9     | *   | *    | 2.4   | 2.5   | *     | .0  | 5.0   |         |
| 10-11   | .0  | *    | .8    | 1.2   | *     | .0  | 2.0   |         |
| 12      | .0  | .0   | .1    | .6    | .0    | .0  | .8    |         |
| 13-16   | .0  | .0   | .0    | .3    | .0    | .0  | .3    |         |
| 17-19   | .0  | .0   | *     | .0    | .0    | *   | *     |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.5 | 20.6 | 61.8  | 15.0  | .1    | .0  | 100.0 | 4100    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | .9  | 5.6  | 9.8  | 8.5  | 4.6  | 1.3  | .7    | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1578        | 4 |
| 6-7             | .0  | 1.3  | 5.4  | 8.7  | 7.8  | 4.2  | 2.2   | .7  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1529        | 6 |
| 8-9             | .0  | .2   | 1.0  | 3.4  | 4.2  | 2.2  | 1.2   | .5  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 643         | 7 |
| 10-11           | .0  | .4   | .7   | .9   | .9   | .5   | .5    | .2  | .2    | *     | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 219         | 7 |
| 12-13           | .0  | .0   | .4   | .4   | .3   | .1   | .1    | *   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 66          | 6 |
| >13             | .0  | .0   | .0   | .1   | .2   | .2   | .1    | *   | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 25          | 8 |
| INDET           | 1.4 | 3.3  | 4.8  | 3.3  | 2.7  | 1.6  | .7    | .1  | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 890         | 4 |
| TOTAL           | 112 | 532  | 1094 | 1255 | 1023 | 503  | 265   | 94  | 68    | 2     | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | .0    | 4950        | 5 |
| PCT             | 2.3 | 10.7 | 22.1 | 25.4 | 20.7 | 10.2 | 5.4   | 1.9 | 1.4   | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1856-1973

JULY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                           |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|---------------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | ORZL | FRIG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST BLWG SNOW | NO SIG MEA |  |
| N                  | .1   | .1        | .2   | .0        | .0   | .0              | *    | .4              | *              | .4                      | 8.6         | .1                  | 12.2       | 1.8                       | 76.5       |  |
| NE                 | .1   | *         | .1   | .0        | .0   | .0              | .1   | .3              | .2             | .4                      | 6.0         | .1                  | 9.6        | 2.1                       | 81.4       |  |
| E                  | .0   | .5        | 1.9  | .0        | .0   | .0              | .0   | 2.4             | .8             | 1.1                     | 10.8        | 1.1                 | 14.2       | 1.1                       | 68.5       |  |
| SE                 | .0   | 9.0       | .0   | .0        | .0   | .0              | .0   | 9.0             | .0             | .0                      | 4.5         | .0                  | 20.7       | 3.6                       | 62.2       |  |
| S                  | .6   | .0        | .0   | .0        | .0   | .0              | .0   | .6              | .0             | 1.2                     | 13.6        | .0                  | 9.2        | .0                        | 75.4       |  |
| SW                 | 1.4  | 1.0       | .0   | .0        | .0   | .0              | .0   | 2.4             | .0             | 1.9                     | 14.1        | .5                  | 6.5        | 2.9                       | 71.8       |  |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .5                      | 13.2        | .2                  | 12.7       | 2.4                       | 71.0       |  |
| NW                 | .1   | .0        | *    | .0        | .0   | .0              | .0   | .1              | .0             | .5                      | 10.7        | .1                  | 12.2       | 1.5                       | 74.8       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .7             | .7                      | 26.3        | .0                  | 11.7       | .7                        | 59.9       |  |
| TOT PCT            | .1   | .1        | .1   | .0        | .0   | .0              | *    | .4              | .1             | .5                      | 8.9         | .1                  | 11.6       | 1.8                       | 76.7       |  |
| TOT OBS:           | 8108 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                           |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DKZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FOG W/<br>PCPN | FOG W/<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003         | .2                 | .1           | .1   | .0           | .0   | .0                    | .1   | .4                      | .0                | .9           | 7.4            | .0                        | 9.7           | 2.0                             | 79.7             |
| 06009         | .2                 | .2           | .4   | .0           | .0   | .0                    | .0   | .8                      | .2                | 1.0          | 9.5            | *                         | 9.5           | 1.5                             | 77.6             |
| 12015         | .2                 | *            | *    | .0           | .0   | .0                    | *    | .4                      | .1                | .0           | 9.4            | .3                        | 12.2          | 1.9                             | 75.8             |
| 18021         | .0                 | *            | .1   | .0           | .0   | .0                    | .0   | .1                      | .0                | .1           | 9.8            | .0                        | 14.6          | 2.0                             | 73.4             |
| TOT PCT       | .1                 | .1           | .2   | .0           | .0   | .0                    | *    | .4                      | .1                | .5           | 9.1            | .1                        | 11.5          | 1.8                             | 76.5             |
| TOT OBS:      | 8281               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | 0-3 | WIND SPEED (KNOTS) |       |       |       |    | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|-----|--------------------|-------|-------|-------|----|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|
|          |     | 4-10               | 11-21 | 22-33 | 34-47 | 00 |       |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.1 | 12.3               | 28.2  | 7.6   | .1    | .0 |       | 49.3         | 14.9        | 51.1        | 56.8       | 48.9  | 43.3  | 48.3  | 60.4  | 51.9  | 46.5  |
| NE       | .7  | 7.8                | 19.2  | 4.4   | .1    | .0 |       | 32.1         | 14.7        | 29.6        | 21.4       | 31.7  | 41.9  | 31.9  | 22.5  | 29.1  | 37.6  |
| E        | .2  | .8                 | .5    | .1    | *     | .0 |       | 1.6          | 9.6         | 1.5         | 1.2        | 1.7   | 2.2   | 1.6   | 1.0   | 1.1   | 1.7   |
| SE       | .1  | .3                 | .1    | *     | *     | .0 |       | .4           | 8.8         | .3          | .6         | .3    | .6    | .6    | .0    | .5    | *     |
| S        | .1  | .5                 | .1    | *     | .0    | .0 |       | .7           | 7.4         | .8          | 2.9        | .8    | .6    | .8    | .6    | .7    | .5    |
| SW       | .2  | .8                 | .2    | *     | .0    | .0 |       | 1.2          | 6.9         | .9          | 1.4        | 1.3   | .9    | 1.2   | 1.8   | 1.4   | 1.6   |
| W        | .3  | 2.2                | .6    | *     | .0    | .0 |       | 3.1          | 7.6         | 3.5         | 2.3        | 3.0   | 2.0   | 3.3   | 4.5   | 3.3   | 2.0   |
| NW       | .5  | 5.4                | 3.7   | .5    | *     | .0 |       | 10.1         | 10.7        | 10.4        | 13.5       | 10.5  | 7.5   | 10.5  | 8.6   | 10.4  | 9.0   |
| VAR      | .0  | .0                 | .0    | .0    | .0    | .0 |       | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.6 |                    |       |       |       |    |       | 1.6          | .0          | 1.9         | .0         | 1.8   | 1.1   | 1.8   | .6    | 1.6   | 1.0   |
| TOT OBS  | 729 | 4529               | 7940  | 1905  | 23    | 1  | 15127 |              | 13.7        | 2982        | 165        | 2951  | 1380  | 3184  | 168   | 2961  | 1336  |
| TOT PCT  | 4.8 | 29.9               | 52.5  | 12.6  | .2    | *  |       | 100.0        |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 4.8                | 23.4 | 19.5  | 1.5   | *   |           | 49.3     | 14.9     | 51.4       | 47.1  | 48.9  | 50.2  |
| NE       | 2.9                | 15.3 | 13.1  | .8    | .0  |           | 32.1     | 14.7     | 29.2       | 35.0  | 31.4  | 31.7  |
| E        | .6                 | .8   | .2    | *     | .0  |           | 1.6      | 9.6      | 1.5        | 1.9   | 1.6   | 1.3   |
| SE       | .2                 | .2   | *     | .0    | *   |           | .4       | 8.8      | .3         | .4    | .6    | .4    |
| S        | .4                 | .3   | *     | .0    | .0  |           | .7       | 7.4      | .9         | .8    | .8    | .6    |
| SW       | .7                 | .4   | .1    | *     | .0  |           | 1.2      | 6.9      | .9         | 1.2   | 1.2   | 1.4   |
| W        | 1.5                | 1.5  | .1    | .0    | .0  |           | 3.1      | 7.6      | 3.5        | 2.7   | 3.4   | 2.9   |
| NW       | 2.6                | 5.8  | 1.6   | .1    | .0  |           | 10.1     | 10.7     | 10.5       | 9.5   | 10.4  | 10.0  |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 1.6                |      |       |       |     |           | 1.6      | .0       | 1.8        | 1.5   | 1.7   | 1.4   |
| TOT OBS  | 2306               | 7214 | 5237  | 367   | 3   | 15127     |          | 13.7     | 3147       | 4331  | 3352  | 4297  |
| TOT PCT  | 15.2               | 47.7 | 34.6  | 2.4   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1856-1973

JULY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 1.8  | 2.1 | 30.4 | 52.1               | 13.4  | .1    | *   | 13.9  | 100.0    | 3147      |
| 06009 | 1.5  | 3.6 | 31.0 | 51.9               | 12.0  | .1    | .0  | 13.5  | 100.0    | 4331      |
| 12015 | 1.7  | 4.0 | 29.6 | 53.0               | 11.5  | .3    | .0  | 13.6  | 100.0    | 3352      |
| 18021 | 1.4  | 3.1 | 28.8 | 53.0               | 13.5  | .2    | .0  | 13.9  | 100.0    | 4297      |
| TOT   | 244  | 485 | 4529 | 7940               | 1905  | 23    | 1   | 13.7  |          | 15127     |
| PCT   | 1.6  | 3.2 | 29.9 | 52.5               | 12.6  | .2    | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4 | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|-----|------|--------------|--------------|------------------------|
|          |      |     |      |              |              |                        |
| N        | 30.4 | 5.3 | 10.4 | 10.2         |              | 3.1                    |
| NE       | 10.6 | 2.3 | 5.1  | 3.9          |              | 3.4                    |
| E        | .5   | .1  | .2   | .2           |              | 3.7                    |
| SE       | *    | *   | *    | .2           |              | 6.3                    |
| S        | .6   | .1  | .1   | .2           |              | 2.9                    |
| SW       | .5   | .1  | .3   | .3           |              | 3.7                    |
| W        | 1.3  | .4  | .9   | 1.4          |              | 4.7                    |
| NW       | 4.5  | 1.3 | 3.2  | 3.6          |              | 4.4                    |
| VAR      | .0   | .0  | .0   | .0           |              | .0                     |
| CALM     | .9   | .1  | .3   | .5           |              | 3.6                    |
| TOT OBS  | 3183 | 634 | 1334 | 1320         | 6471         | 3.4                    |
| TOT PCT  | 49.2 | 9.8 | 20.6 | 20.4         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| .6  | .1  | .6  | 2.1 | 4.8  | 3.9  | 1.4  | .6   | .6   | 1.4   | 40.2               |              |
| .1  | .0  | .3  | .9  | 2.5  | 1.4  | .8   | .3   | .3   | .6    | 14.8               |              |
| .0  | .0  | .0  | *   | .1   | .1   | *    | *    | .0   | *     | .6                 |              |
| *   | *   | .0  | *   | .1   | *    | .0   | .0   | .0   | .0    | .1                 |              |
| .0  | .0  | *   | *   | .1   | .1   | .1   | *    | .0   | .0    | .7                 |              |
| *   | .0  | *   | .1  | .1   | .1   | .1   | *    | *    | *     | .8                 |              |
| .1  | .0  | *   | .2  | .6   | .4   | .2   | *    | .1   | .2    | 2.2                |              |
| .2  | *   | .1  | .9  | 1.8  | 1.3  | .4   | .1   | .1   | .4    | 7.4                |              |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| .2  | .0  | *   | .1  | .1   | .2   | .1   | *    | *    | *     | 1.1                |              |
| 83  | 10  | 68  | 278 | 655  | 475  | 191  | 74   | 69   | 170   | 4398               | 6471         |
| 1.3 | .2  | 1.1 | 4.3 | 10.1 | 7.3  | 3.0  | 1.1  | 1.1  | 2.6   | 68.0               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| * OR >6500        | 1.2       | 3.0  | 3.7  | 3.7  | 3.7  | 3.7  | 3.7   | 3.7  |
| * OR >5000        | 1.8       | 4.0  | 4.8  | 4.9  | 4.9  | 4.9  | 4.9   | 4.9  |
| * OR >3500        | 3.2       | 6.7  | 7.7  | 7.8  | 7.8  | 7.8  | 7.8   | 7.8  |
| * OR >2000        | 6.4       | 12.9 | 15.0 | 15.1 | 15.1 | 15.1 | 15.1  | 15.1 |
| * OR >1000        | 10.4      | 22.1 | 25.0 | 25.1 | 25.2 | 25.2 | 25.2  | 25.2 |
| * OR >600         | 11.9      | 25.8 | 29.3 | 29.4 | 29.5 | 29.5 | 29.5  | 29.5 |
| * OR >300         | 12.1      | 26.5 | 30.3 | 30.5 | 30.5 | 30.6 | 30.6  | 30.6 |
| * OR >150         | 12.1      | 26.6 | 30.4 | 30.6 | 30.6 | 30.7 | 30.7  | 30.7 |
| * OR >0           | 12.2      | 27.1 | 31.4 | 31.6 | 31.7 | 31.8 | 31.9  | 31.9 |
| TOTAL             | 795       | 1769 | 2053 | 2064 | 2070 | 2075 | 2083  | 2085 |

TOTAL NUMBER OF OBS: 6533

PCT FREQ NH <5/8: 68.1

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8    | OBSCD | TOTAL<br>OBS |
|------|-----|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| 42.4 | 7.7 | 6.0 | 5.3 | 5.2 | 3.8 | 5.6 | 7.2 | 15.6 | 1.2   | 6940         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1896-1973

JULY

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | *  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | .1   | *    | *   | *  | .0  | .0  | *   | .1   | .0  | .1   | .3    |              |
|              | TOT %  | .1   | *    | *   | *  | .0  | .0  | *   | .1   | .0  | .1   | .3    |              |
| 1/2<1        | PCP    | *    | .0   | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | .8   | .4   | .1  | *  | .1  | .1  | .1  | .3   | .0  | *    | 1.9   |              |
|              | TOT %  | .9   | .4   | .1  | *  | .1  | .1  | .1  | .3   | .0  | *    | 2.0   |              |
| 1<2          | PCP    | *    | *    | .0  | .0 | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | 1.1  | .5   | .1  | *  | .0  | *   | .1  | .2   | .0  | .1   | 2.0   |              |
|              | TOT %  | 1.2  | .5   | .1  | *  | .0  | *   | .1  | .2   | .0  | .1   | 2.1   |              |
| 2<5          | PCP    | *    | .0   | .0  | *  | .0  | .0  | *   | .0   | .0  | .0   | *     |              |
|              | NO PCP | 5.6  | 1.8  | .1  | *  | .1  | .1  | .5  | 1.6  | .0  | .2   | 10.1  |              |
|              | TOT %  | 5.7  | 1.8  | .1  | *  | .1  | .1  | .5  | 1.6  | .0  | .2   | 10.1  |              |
| 5<10         | PCP    | .2   | *    | *   | *  | .0  | *   | .0  | *    | .0  | .0   | .3    |              |
|              | NO PCP | 26.2 | 10.1 | .5  | .2 | .5  | .6  | 1.6 | 5.7  | .0  | .8   | 46.3  |              |
|              | TOT %  | 26.4 | 10.2 | .6  | .2 | .5  | .6  | 1.6 | 5.8  | .0  | .8   | 46.6  |              |
| 10+          | PCP    | *    | *    | .0  | .0 | *   | *   | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | 21.4 | 9.7  | .3  | .1 | .4  | .4  | 1.6 | 4.5  | .0  | .4   | 38.9  |              |
|              | TOT %  | 21.4 | 9.7  | .3  | .1 | .4  | .4  | 1.6 | 4.5  | .0  | .4   | 39.0  |              |
| TOT OBS      |        |      |      |     |    |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |     |    |     |     |     |      |     |      |       |              |
|              |        | 55.5 | 22.6 | 1.2 | .3 | 1.1 | 1.3 | 4.0 | 12.4 | .0  | 1.7  | 100.0 | 8082         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0  | .0 | .0 | .0  | .0  | *    | .0  | .1   | .1    |              |
|              | 4-10       | *    | *    | *   | *  | .0 | .0  | *   | *    | .0  |      | .1    |              |
|              | 11-21      | *    | .0   | .0  | .0 | .0 | .0  | .0  | *    | .0  |      | *     |              |
|              | 22+        | .0   | *    | .0  | *  | .0 | .0  | .0  | .0   | .0  |      | *     |              |
|              | TOT %      | .1   | *    | *   | *  | .0 | .0  | *   | *    | .1  | .0   | .3    |              |
| 1/2<1        | 0-3        | *    | *    | *   | .0 | *  | *   | *   | *    | .0  | *    | .2    |              |
|              | 4-10       | .1   | .1   | *   | *  | *  | *   | .1  | .1   | .0  |      | .5    |              |
|              | 11-21      | .4   | .2   | *   | .0 | *  | .0  | *   | *    | .0  |      | .7    |              |
|              | 22+        | .1   | *    | .0  | .0 | .0 | *   | .0  | *    | .0  |      | .1    |              |
|              | TOT %      | .6   | .3   | *   | *  | .1 | *   | .1  | .2   | .0  | *    | 1.5   |              |
| 1<2          | 0-3        | *    | *    | .0  | .0 | .0 | .0  | *   | *    | .0  | .1   | .1    |              |
|              | 4-10       | .2   | .1   | *   | *  | *  | *   | .1  | .1   | .0  |      | .5    |              |
|              | 11-21      | .7   | .3   | *   | .0 | .0 | .0  | *   | .1   | .0  |      | 1.0   |              |
|              | 22+        | .1   | .1   | .0  | .0 | .0 | .0  | .0  | *    | .0  |      | .3    |              |
|              | TOT %      | 1.0  | .5   | *   | *  | *  | *   | .1  | .2   | .0  | .1   | 2.0   |              |
| 2<5          | 0-3        | .2   | .1   | *   | *  | *  | *   | .1  | .1   | .0  | .3   | .7    |              |
|              | 4-10       | 1.3  | .6   | .1  | *  | .1 | .1  | .3  | .8   | .0  |      | 3.3   |              |
|              | 11-21      | 2.8  | 1.2  | .1  | *  | .0 | *   | *   | .5   | .0  |      | 4.6   |              |
|              | 22+        | .8   | .3   | *   | .0 | .0 | .0  | .0  | *    | .0  |      | 1.2   |              |
|              | TOT %      | 5.1  | 2.1  | .2  | *  | .1 | .1  | .4  | 1.4  | .0  | .3   | 9.8   |              |
| 5<10         | 0-3        | .5   | .3   | .1  | *  | .1 | .1  | .2  | .2   | .0  | .8   | 2.2   |              |
|              | 4-10       | 5.6  | 2.4  | .3  | .1 | .2 | .4  | 1.1 | 2.6  | .0  |      | 12.8  |              |
|              | 11-21      | 13.9 | 7.0  | .2  | *  | .1 | .1  | .2  | 2.1  | .0  |      | 23.6  |              |
|              | 22+        | 3.9  | 1.9  | *   | *  | .0 | .0  | .0  | .3   | .0  |      | 6.2   |              |
|              | TOT %      | 23.9 | 11.6 | .6  | .2 | .4 | .6  | 1.5 | 5.2  | .0  | .8   | 44.8  |              |
| 10+          | 0-3        | .4   | .2   | .1  | *  | .1 | .1  | .1  | .1   | .0  | .4   | 1.4   |              |
|              | 4-10       | 5.8  | 3.1  | .2  | .1 | .2 | .2  | 1.0 | 2.3  | .0  |      | 13.0  |              |
|              | 11-21      | 12.6 | 7.9  | .2  | *  | .1 | .1  | .3  | 1.5  | .0  |      | 22.7  |              |
|              | 22+        | 2.8  | 1.5  | *   | *  | *  | *   | *   | .2   | .0  |      | 4.6   |              |
|              | TOT %      | 21.5 | 12.8 | .4  | .1 | .4 | .4  | 1.5 | 4.1  | .0  | .4   | 41.7  |              |
| TOT OBS      |            |      |      |     |    |    |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |     |    |    |     |     |      |     |      |       |              |
|              |            | 52.3 | 27.4 | 1.3 | .4 | .9 | 1.2 | 3.6 | 11.3 | .0  | 1.6  | 100.0 | 11104        |

JULY

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1856-1973AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | 1.4        | .1         | .5         | 2.4        | 6.8          | 4.4          | 1.2          | .5           | .7           | 1.3   | 19.3  | 80.7               | 1613         |
| 06009         | 2.3        | .1         | 1.6        | 5.6        | 13.4         | 8.3          | 3.6          | 1.6          | 1.0          | 2.6   | 40.2  | 59.8               | 1596         |
| 12015         | .7         | .3         | 1.3        | 4.9        | 11.7         | 9.0          | 3.4          | 1.6          | 1.4          | 3.8   | 38.2  | 61.8               | 1847         |
| 18021         | .7         | .1         | .8         | 3.8        | 7.2          | 6.7          | 3.2          | .8           | 1.1          | 2.5   | 26.9  | 73.1               | 1677         |
| TOT           | 85         | 10         | 71         | 283        | 662          | 483          | 194          | 75           | 71           | 175   | 2109  | 4624               | 6733         |
| PCT           | 1.3        | .1         | 1.1        | 4.2        | 9.8          | 7.2          | 2.9          | 1.1          | 1.1          | 2.6   | 31.3  | 68.7               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5  | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|------|------|------|--------------|
| 00003         | .2   | 1.2   | 1.5 | 7.7  | 42.5 | 46.9 | 2498         |
| 06009         | .6   | 1.8   | 2.1 | 7.6  | 44.0 | 43.8 | 3043         |
| 12015         | .3   | 1.3   | 2.3 | 13.3 | 44.9 | 38.1 | 2720         |
| 18021         | .1   | 1.9   | 2.1 | 10.8 | 47.1 | 38.0 | 3019         |
| TOT           | 33   | 178   | 228 | 1110 | 5044 | 4687 | 11280        |
| PCT           | .3   | 1.6   | 2.0 | 9.8  | 44.7 | 41.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | 1.4           | 2.3        | 11.9        | 14.2            | 73.9              | 1552         |
| 06009         | 2.4           | 4.2        | 17.5        | 28.0            | 54.5              | 1556         |
| 12015         | .7            | 2.5        | 20.7        | 27.1            | 52.2              | 1786         |
| 18021         | .7            | 1.7        | 17.3        | 18.6            | 64.1              | 1639         |
| TOT           | 82            | 173        | 1111        | 1445            | 3977              | 6533         |
| PCT           | 1.3           | 2.6        | 17.0        | 22.1            | 60.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | *     | .1    | .1    | .0    | .0     | 9            | .1          |
| 80/84  | .0   | .0    | *     | .1    | .3    | 1.5   | .8    | .2     | 183          | 2.9         |
| 75/79  | .0   | .0    | *     | *     | .7    | 7.3   | 9.3   | 2.8    | 1267         | 20.1        |
| 70/74  | .0   | .0    | .0    | *     | .3    | 7.0   | 26.0  | 12.4   | 2887         | 45.8        |
| 65/69  | .0   | .0    | .0    | .0    | .1    | 1.1   | 15.5  | 14.0   | 1931         | 30.7        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .1    | .3     | 23           | .4          |
| TOTAL  | 0    | 0     | 3     | 8     | 97    | 1072  | 3256  | 1864   | 6300         | 100.0       |
| PCT    | .0   | .0    | *     | .1    | 1.5   | 17.0  | 51.7  | 29.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW  | W   | NW   | VAR | CALM |
|-------|------|------|-----|----|----|-----|-----|------|-----|------|
| 85/89 | .1   | *    | .0  | .0 | *  | .0  | *   | *    | .0  | .0   |
| 80/84 | 1.3  | .4   | .1  | *  | .1 | .1  | .2  | .7   | .0  | *    |
| 75/79 | 8.9  | 3.3  | .2  | .1 | .4 | .4  | 1.9 | 4.4  | .0  | .5   |
| 70/74 | 24.5 | 12.0 | .6  | .1 | .3 | .4  | 1.5 | 5.9  | .0  | .5   |
| 65/69 | 19.9 | 8.5  | .4  | .0 | *  | .1  | .2  | 1.4  | .0  | .1   |
| 60/64 | .3   | *    | *   | .0 | .0 | .0  | .0  | *    | .0  | .0   |
| TOTAL | 55.0 | 24.2 | 1.2 | .3 | .9 | 1.0 | 3.8 | 12.4 | .0  | 1.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 79  | 77  | 71  | 66 | 64 | 62  | 70.8 | 3164         |
| 06009         | 86  | 79  | 76  | 71  | 65 | 64 | 59  | 70.7 | 4344         |
| 12015         | 90  | 83  | 81  | 73  | 67 | 66 | 61  | 73.6 | 3310         |
| 18021         | 88  | 83  | 80  | 73  | 67 | 66 | 64  | 73.1 | 4256         |
| TOT           | 90  | 82  | 79  | 72  | 66 | 64 | 59  | 72.0 | 15074        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | .5    | 7.5   | 50.7  | 41.3   | 88   | 1561         |
| 06009         | .0   | .2    | .4    | 7.3   | 47.6  | 44.5   | 88   | 1641         |
| 12015         | .0   | .2    | 3.4   | 30.5  | 51.8  | 14.1   | 82   | 1608         |
| 18021         | .0   | .2    | 1.9   | 22.7  | 56.6  | 18.6   | 84   | 1605         |
| TOT           | 0    | 11    | 98    | 1091  | 3315  | 1900   | 85   | 6415         |

JULY

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1856-1973

TABLE 17

AREA 0006 CAPE BLANC  
20.3N 18.1WPCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | M<br>FOG | W<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | 1     | .0       | *        |
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | *        | 3     | .0       | *        |
| 14/16              | .0       | .0       | .0       | .0       | *        | .1       | .1       | *        | .0       | 15    | *        | .2       |
| 11/13              | .0       | .0       | .0       | .0       | *        | .2       | .1       | .1       | *        | 29    | .1       | .3       |
| 9/10               | .0       | .0       | *        | .0       | .3       | .4       | .1       | *        | .0       | 62    | .2       | .7       |
| 7/8                | .0       | .0       | *        | .3       | .8       | .5       | .2       | .1       | .0       | 146   | .3       | 1.7      |
| 6                  | .0       | .0       | *        | .5       | .6       | .4       | .1       | *        | *        | 128   | .3       | 1.4      |
| 5                  | .0       | .0       | .2       | .9       | 1.2      | .7       | .4       | *        | .0       | 250   | .4       | 2.9      |
| 4                  | .0       | .0       | .7       | 1.7      | 1.3      | .7       | .4       | .1       | .0       | 362   | .7       | 4.2      |
| 3                  | .0       | *        | 1.8      | 2.7      | 1.6      | .5       | .2       | .0       | .0       | 509   | .7       | 6.1      |
| 2                  | .0       | .1       | 3.3      | 4.1      | 1.9      | 1.1      | .4       | *        | .0       | 813   | 1.4      | 9.5      |
| 1                  | .0       | .1       | 4.4      | 5.6      | 2.9      | 1.0      | .1       | .0       | .0       | 1058  | 1.4      | 12.7     |
| 0                  | .0       | .1       | 3.6      | 5.4      | 4.2      | 1.7      | .2       | *        | .0       | 1137  | 1.1      | 14.1     |
| -1                 | .0       | .1       | 2.2      | 4.3      | 4.3      | 1.3      | .2       | .0       | .0       | 921   | 1.0      | 11.3     |
| -2                 | *        | .2       | 1.5      | 3.1      | 3.1      | 1.3      | *        | .0       | .0       | 689   | .7       | 8.5      |
| -3                 | .0       | .1       | .7       | 2.5      | 2.8      | .5       | .1       | .0       | .0       | 500   | .4       | 6.3      |
| -4                 | .0       | .1       | .9       | 1.7      | 1.7      | .4       | .0       | .0       | .0       | 356   | .3       | 4.4      |
| -5                 | *        | .1       | .6       | 1.5      | .9       | .2       | *        | .0       | .0       | 249   | .5       | 2.9      |
| -6                 | *        | *        | .2       | .5       | .4       | *        | .0       | .0       | .0       | 94    | .1       | 1.2      |
| -7/-8              | *        | *        | .4       | .5       | .3       | *        | .0       | .0       | .0       | 101   | .2       | 1.1      |
| -9/-10             | .0       | .1       | .1       | .3       | .1       | .0       | .0       | .0       | .0       | 49    | *        | .6       |
| -11/-13            | .0       | *        | .1       | *        | .0       | .0       | .0       | .0       | .0       | 14    | .0       | .2       |
| -14/-16            | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *        |
| TOTAL              | 4        | 72       | 1561     | 2672     | 2146     | 811      | 196      | 23       | 3        | 7488  | 721      | 6767     |
| PCT                | .1       | 1.0      | 20.8     | 35.7     | 28.7     | 10.8     | 2.6      | .3       | *        | 100.0 | 9.6      | 90.4     |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      |     |      |       |       |       | NE  |      |  |  |  |  |  |  |  |  |  |  |  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|--|--|--|--|--|--|--|--|--|--|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |  |  |  |  |  |  |  |  |  |  |  |
| <1      | .6  | 1.6  | .2    | .0    | .0    | .0  | 2.4  | .1  | .4   | *     | .0    | .0    | .0  | .5   |  |  |  |  |  |  |  |  |  |  |  |
| 1-2     | .3  | 7.1  | 4.8   | .0    | .0    | .0  | 12.1 | .1  | 2.2  | 1.5   | .0    | .0    | .0  | 3.8  |  |  |  |  |  |  |  |  |  |  |  |
| 3-4     | *   | 3.5  | 12.6  | 1.2   | .0    | .0  | 17.4 | .0  | 1.4  | 4.8   | .4    | .0    | .0  | 6.6  |  |  |  |  |  |  |  |  |  |  |  |
| 5-6     | *   | .6   | 9.5   | 1.6   | .1    | .0  | 11.8 | .0  | .3   | 3.1   | .6    | *     | .0  | 4.1  |  |  |  |  |  |  |  |  |  |  |  |
| 7       | *   | .2   | 5.0   | 2.9   | *     | .0  | 8.1  | .0  | *    | 1.3   | .8    | *     | .0  | 2.1  |  |  |  |  |  |  |  |  |  |  |  |
| 8-9     | .0  | *    | 1.8   | 2.2   | .0    | .0  | 4.0  | .0  | .0   | .5    | .5    | .0    | .0  | 1.0  |  |  |  |  |  |  |  |  |  |  |  |
| 10-11   | .0  | .0   | .5    | 1.3   | .0    | .0  | 1.8  | .0  | .0   | .2    | .2    | *     | .0  | .4   |  |  |  |  |  |  |  |  |  |  |  |
| 12      | .0  | *    | .2    | .5    | .0    | .0  | .7   | .0  | .0   | .1    | .1    | .0    | .0  | .1   |  |  |  |  |  |  |  |  |  |  |  |
| 13-16   | .0  | .0   | .1    | .4    | .1    | .0  | .5   | .0  | .0   | .0    | .1    | *     | .0  | .1   |  |  |  |  |  |  |  |  |  |  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |  |  |  |  |  |  |  |  |  |  |  |
| TOT PCT | 1.0 | 13.0 | 34.7  | 10.0  | .1    | .0  | 58.8 | .2  | 4.3  | 11.5  | 2.7   | .1    | .0  | 18.8 |  |  |  |  |  |  |  |  |  |  |  |

| E       |     |      |       |       |       |     |     |     |      |       |       |       | SE  |     |  |  |  |  |  |  |  |  |  |  |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|--|--|--|--|--|--|--|--|--|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |  |  |  |  |  |  |  |  |  |  |
| <1      | *   | .1   | .0    | .0    | .0    | .0  | .1  | *   | *    | .0    | .0    | .0    | .0  | *   |  |  |  |  |  |  |  |  |  |  |  |
| 1-2     | .0  | .1   | *     | .0    | .0    | .0  | .2  | .0  | .1   | *     | .0    | .0    | .0  | .1  |  |  |  |  |  |  |  |  |  |  |  |
| 3-4     | .0  | .2   | .1    | .0    | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | *   |  |  |  |  |  |  |  |  |  |  |  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |  |  |  |  |  |  |  |  |  |  |  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |  |  |  |  |  |  |  |  |  |  |  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 10-11   | .0  | .0   | .0    | .0    | *     | *   | *   | .0  | .0   | .0    | .0    | .0    | *   | *   |  |  |  |  |  |  |  |  |  |  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |  |  |  |  |  |  |  |  |  |  |  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |  |  |  |  |  |  |  |  |  |
| TOT PCT | *   | .4   | .2    | *     | .0    | .0  | .6  | *   | .1   | .1    | *     | .0    | *   | .3  |  |  |  |  |  |  |  |  |  |  |  |



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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | *    | .0    | .0    | .0    | .0  | .1  | *   | .2   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | *   | .5   | .1    | .0    | .0    | .0  | .6  | .1  | .6   | .1    | .0    | .0    | .0  | .8  |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .6   | .3    | *     | .0    | .0  | 1.0 | .1  | .9   | .2    | .0    | .0    | .0  | 1.2 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .2  | .7   | *     | .0    | .0    | .0  | .9  | .1  | .9   | *     | .0    | .0    | .0  | 1.1  |           |
| 1-2     | .1  | 1.8  | .1    | .0    | .0    | .0  | 2.0 | .1  | 3.6  | 1.1   | .0    | .0    | .0  | 4.8  |           |
| 3-4     | .0  | .4   | .4    | .0    | .0    | .0  | .7  | *   | 2.0  | 2.0   | .1    | .0    | .0  | 4.0  |           |
| 5-6     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | .3   | 1.3   | .2    | .0    | .0  | 1.8  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | *    | .5    | .3    | .0    | .0  | .8   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .1    | .1    | .0    | .0  | .2   |           |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .1    | .0    | .0  | .1   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | .1   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .2  | 3.0  | .9    | .0    | .0    | .0  | 4.1 | .3  | 6.8  | 5.0   | .7    | .0    | .0  | 12.9 | 97.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+     | PCT  | TOT OBS |
|---------|-----|------|-------|-------|-------|---------|------|---------|
| <1      | 3.8 | 4.0  | .3    | .0    | .0    | .0      | 8.1  |         |
| 1-2     | .9  | 16.0 | 7.7   | .0    | .0    | .0      | 24.5 |         |
| 3-4     | .1  | 7.6  | 20.0  | 1.6   | .0    | .0      | 29.3 |         |
| 5-6     | *   | 1.2  | 14.2  | 2.4   | .1    | .0      | 18.0 |         |
| 7       | *   | .3   | 6.8   | 4.0   | *     | .0      | 11.1 |         |
| 8-9     | .0  | *    | 2.3   | 2.8   | .0    | .0      | 5.1  |         |
| 10-11   | .0  | .0   | .8    | 1.6   | *     | *       | 2.4  |         |
| 12      | .0  | *    | .3    | .6    | .0    | .0      | .9   |         |
| 13-16   | .0  | .0   | .1    | .5    | .1    | .0      | .6   |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0      | .0   |         |
| TOT PCT | 4.8 | 29.1 | 52.4  | 13.5  | .2    | * 100.0 |      | 4525    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.1 | 5.9  | 10.0 | 7.5  | 3.5  | 1.5  | .5    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1657  | 4        |
| 6-7          | .0  | 1.1  | 6.0  | 9.3  | 7.0  | 4.2  | 1.7   | .7  | .3    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1666  | 6        |
| 8-9          | .0  | .3   | 1.4  | 3.2  | 4.4  | 2.4  | 1.2   | .4  | .3    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 754   | 7        |
| 10-11        | .0  | .1   | .5   | 1.1  | 1.3  | 1.1  | .4    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 263   | 7        |
| 12-13        | .0  | .0   | .5   | .5   | .3   | .3   | .4    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 122   | 7        |
| >13          | .0  | .0   | .0   | .1   | .2   | .1   | .1    | .1  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 29    | 8        |
| INDET        | 1.8 | 3.1  | 4.4  | 3.4  | 2.5  | 1.0  | 1.0   | .4  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 978   | 4        |
| TOTAL        | 159 | 577  | 1252 | 1378 | 1053 | 584  | 296   | 105 | 67    | 5     | 2     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 5479  | 5        |
| PCT          | 2.9 | 10.5 | 22.9 | 25.2 | 19.2 | 10.7 | 5.4   | 1.9 | 1.2   | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FGG WQ PCPN | FGG WQ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .1   | *         | .1   | .0        | .0   | .0              | .0   | .2              |                | .6                      | 5.6         | *                   | 8.8        | 1.3                  | 83.3       |
| NE                 | .2   | .3        | .2   | .0        | .0   | .0              | .0   | .6              | .2             | .5                      | 5.5         | *                   | 7.9        | 1.5                  | 83.7       |
| E                  | 3.2  | 1.3       | 1.0  | .0        | .0   | .0              | .0   | 5.4             | .6             | 2.2                     | 6.8         | .0                  | 6.0        | .0                   | 79.6       |
| SE                 | 4.5  | .0        | .8   | .0        | .0   | .0              | .0   | 5.3             | .0             | 4.5                     | 9.5         | .0                  | 2.3        | .0                   | 78.4       |
| S                  | .5   | .0        | .8   | .0        | .0   | .0              | .0   | 1.3             | .0             | 1.6                     | 7.2         | .0                  | 9.3        | 1.1                  | 79.5       |
| SW                 | 2.3  | .0        | .3   | .0        | .0   | .0              | .0   | 2.6             | 1.2            | .0                      | 12.4        | .0                  | 11.2       | .0                   | 72.6       |
| W                  | .0   | .0        | .3   | .0        | .0   | .0              | .0   | .3              | .0             | 1.7                     | 5.3         | .0                  | 10.4       | .0                   | 82.4       |
| NW                 | .2   | .0        | .1   | .0        | .0   | .0              | .0   | .2              | .0             | .5                      | 5.9         | .0                  | 6.9        | 1.6                  | 84.8       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 1.4                     | 10.2        | .0                  | 10.9       | 1.4                  | 76.2       |
| TOT PCT            | .3   |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |
| TOT OBS:           | 8203 | .1        | .1   | .0        | .0   | .0              | .0   | .5              | .2             | .6                      | 5.8         | *                   | 8.4        | 1.3                  | 83.2       |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                               |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FGG<br>WQ<br>PCPN | FGG WQ<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .1                 | .1           | .2   | .0           | .0   | .0                    | .0   | .4                      | .2                | 1.2          | 3.6               | .0                        | 5.9           | 1.3                           | 87.6             |
| 06009         | .6                 | .1           | .3   | .0           | .0   | .0                    | .0   | 1.1                     | .3                | 1.1          | 6.4               | .0                        | 6.1           | 1.1                           | 84.1             |
| 12015         | .4                 | .2           | .0   | .0           | .0   | .0                    | .0   | .6                      | .2                | .1           | 6.2               | .0                        | 9.5           | 1.4                           | 82.2             |
| 18021         | *                  | .0           | *    | .0           | .0   | .0                    | .0   | .1                      | .2                | .4           | 7.1               | *                         | 12.1          | 1.7                           | 78.4             |
| TOT PCT       | .3                 | .1           | .1   | .0           | .0   | .0                    | .0   | .5                      | .2                | .7           | 5.9               | *                         | 8.5           | 1.4                           | 82.9             |
| TOT OBS:      | 8427               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                               |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.2                | 13.4 | 27.0  | 6.7   | .2    | .0  |       | 48.4      | 14.5     |          | 51.7       | 58.7  | 47.3  | 39.6  | 48.5  | 53.6  | 51.7  | 43.1  |
| NE       | .7                 | 9.8  | 18.4  | 4.0   | .1    | .0  |       | 39.0      | 14.0     |          | 30.2       | 26.6  | 34.7  | 41.4  | 33.5  | 27.2  | 28.8  | 30.6  |
| E        | .3                 | 1.3  | .8    | .1    | *     | .0  |       | 2.5       | 9.5      |          | 2.3        | 1.1   | 2.4   | 3.5   | 2.7   | 2.8   | 2.1   | 2.6   |
| SE       | .1                 | .5   | .2    | *     | *     | .0  |       | .8        | 8.6      |          | .3         | .0    | .6    | 1.2   | 1.3   | .7    | .9    | .7    |
| S        | .3                 | .7   | .2    | *     | *     | .0  |       | 1.2       | 6.9      |          | 1.0        | .4    | 1.1   | 1.2   | 1.3   | .9    | 1.3   | 1.6   |
| SW       | .3                 | .8   | .2    | *     | .0    | .0  |       | 1.2       | 7.3      |          | 1.3        | .7    | 1.4   | .8    | 1.1   | .5    | 1.3   | 1.6   |
| W        | .3                 | 1.6  | .4    | *     | .0    | .0  |       | 2.3       | 7.4      |          | 2.5        | 1.5   | 2.1   | 2.1   | 2.2   | 1.3   | 2.5   | 2.9   |
| NW       | .5                 | 4.5  | 3.3   | .3    | .0    | .0  |       | 8.6       | 10.5     |          | 8.5        | 7.7   | 8.5   | 7.8   | 7.8   | 13.0  | 9.6   | 9.2   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |       |     |       | 2.0       | .0       |          | 2.3        | 3.3   | 2.0   | 2.4   | 1.7   | .0    | 1.9   | 1.6   |
| TOT OBS  | 861                | 4986 | 7673  | 1708  | 39    | 0   | 15267 |           | 13.2     |          | 2981       | 182   | 2894  | 1384  | 3196  | 190   | 3073  | 1367  |
| TOT PCT  | 5.6                | 32.7 | 50.3  | 11.2  | .3    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |  |
|----------|------|--------------------|-------|-------|----------|-------|--------------|-------------|-------------|------------|----------|----------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |       |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |  |
| N        | 5.5  | 24.0               | 17.4  | 1.5   | *        |       | 48.4         | 14.5        | 52.1        | 44.8       | 48.7     | 49.1     |  |  |
| NE       | 3.7  | 17.3               | 11.2  | .7    | .0       |       | 39.0         | 14.0        | 30.0        | 30.9       | 33.1     | 31.2     |  |  |
| E        | .9   | 1.3                | .2    | *     | .0       |       | 2.5          | 9.5         | 2.2         | 2.8        | 2.7      | 2.3      |  |  |
| SE       | .4   | .3                 | .1    | *     | .0       |       | .8           | 8.6         | .3          | .8         | 1.2      | .8       |  |  |
| S        | .7   | .4                 | .1    | *     | .0       |       | 1.2          | 6.9         | .9          | 1.1        | 1.3      | 1.4      |  |  |
| SW       | .6   | .5                 | .1    | .0    | .0       |       | 1.2          | 7.3         | 1.2         | 1.2        | 1.1      | 1.4      |  |  |
| W        | 1.2  | 1.1                | .1    | .0    | .0       |       | 2.3          | 7.4         | 2.4         | 2.1        | 2.1      | 2.6      |  |  |
| NW       | 2.3  | 5.0                | 1.2   | .1    | .0       |       | 8.6          | 10.5        | 8.5         | 8.2        | 8.1      | 9.5      |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |       | .0           | .0          | .0          | .0         | .0       | .0       |  |  |
| CALM     | 2.0  |                    |       |       |          |       | 2.0          | .0          | 2.3         | 2.2        | 1.6      | 1.8      |  |  |
| TOT OBS  | 2649 | 7634               | 4630  | 349   | 5        | 15267 |              | 13.2        | 3183        | 4278       | 3386     | 4440     |  |  |
| TOT PCT  | 17.4 | 50.0               | 30.3  | 2.3   | *        |       | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |  |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|----------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00003    | 2.3  | 3.3 | 32.0 | 50.5  | 11.6  | .3    | .0  | 13.3  | 100.0    | 3163      |
| 00609    | 2.2  | 3.8 | 34.3 | 48.6  | 10.8  | .3    | .0  | 12.9  | 100.0    | 4278      |
| 12015    | 1.6  | 3.9 | 31.3 | 51.0  | 11.8  | .3    | .0  | 13.3  | 100.0    | 3386      |
| 18021    | 1.8  | 3.6 | 32.6 | 51.1  | 10.7  | .2    | .0  | 13.2  | 100.0    | 4440      |
| TOT      | 300  | 561 | 4986 | 7673  | 1708  | 39    | 0   | 13.2  |          | 15267     |
| PCT      | 2.0  | 3.7 | 32.7 | 50.3  | 11.2  | .3    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 6 | TOTAL | MEAN CLOUD COVER |
|----------|------|------|------|-------|-------|------------------|
| N        | 34.5 | 7.0  | 9.9  | 6.8   |       | 2.6              |
| NE       | 12.8 | 3.2  | 5.5  | 3.2   |       | 3.1              |
| E        | .7   | .3   | .4   | .3    |       | 3.7              |
| SE       | .3   | .1   | .2   | *     |       | 3.3              |
| S        | .6   | .1   | .2   | .2    |       | 3.0              |
| SW       | .3   | .1   | .2   | .2    |       | 4.0              |
| W        | .8   | .3   | .6   | .4    |       | 4.0              |
| NW       | 4.0  | 1.3  | 2.3  | 1.3   |       | 3.5              |
| VAR      | .0   | .0   | .0   | .0    |       | .0               |
| CALM     | 1.4  | .2   | .1   | .2    |       | 1.7              |
| TOT OBS  | 3662 | 837  | 1290 | 828   | 6617  | 2.8              |
| TOT PCT  | 55.3 | 12.6 | 19.5 | 12.5  | 100.0 |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .3  | *   | .2  | 1.3 | 3.5  | 3.8  | 1.3  | .5   | .5   | .8    | 45.9    |       |
| *   | *   | .1  | 1.1 | 2.2  | 1.6  | .8   | .2   | .2   | .6    | 17.8    |       |
| .0  | .0  | .0  | .1  | .2   | .1   | .1   | .0   | *    | .1    | 1.2     |       |
| .0  | .0  | *   | *   | *    | .1   | .0   | *    | .0   | .0    | .5      |       |
| .0  | .0  | .0  | *   | *    | .1   | *    | .0   | *    | *     | .8      |       |
| .0  | .0  | *   | *   | *    | .1   | *    | .0   | *    | *     | .6      |       |
| .0  | .0  | *   | *   | .2   | .1   | *    | .1   | *    | *     | 1.7     |       |
| *   | .0  | .1  | .4  | .8   | .6   | .3   | .1   | .1   | .2    | 6.3     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| *   | .0  | .0  | *   | *    | *    | .0   | *    | .0   | *     | 1.7     |       |
| 24  | 4   | 29  | 206 | 461  | 426  | 173  | 54   | 58   | 115   | 5067    | 6617  |
| .4  | .1  | .4  | 3.1 | 7.0  | 6.4  | 2.6  | .8   | .9   | 1.7   | 76.6    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | = NR >10 | = NR >5 | = NR >2 | VSBY (NM)<br>= OR >1 | = NR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|----------------------|-----------|-----------|------------|---------|
| = OR >6500     | 1.1      | 2.2     | 2.6     | 2.6                  | 2.6       | 2.6       | 2.6        | 2.6     |
| = OR >5000     | 1.5      | 2.9     | 3.4     | 3.4                  | 3.4       | 3.4       | 3.4        | 3.4     |
| = OR >3500     | 3.0      | 5.4     | 6.0     | 6.0                  | 6.0       | 6.0       | 6.0        | 6.0     |
| = OR >2000     | 6.2      | 11.1    | 12.3    | 12.4                 | 12.4      | 12.4      | 12.4       | 12.4    |
| = OR >1000     | 10.0     | 17.8    | 19.2    | 19.3                 | 19.3      | 19.3      | 19.3       | 19.3    |
| = OR >600      | 11.5     | 20.7    | 22.3    | 22.4                 | 22.4      | 22.4      | 22.4       | 22.4    |
| = OR >300      | 11.7     | 21.0    | 22.7    | 22.8                 | 22.8      | 22.8      | 22.8       | 22.8    |
| = OR >150      | 11.7     | 21.1    | 22.8    | 22.9                 | 22.9      | 22.9      | 22.9       | 22.9    |
| = OR >0        | 11.7     | 21.2    | 23.1    | 23.2                 | 23.2      | 23.2      | 23.3       | 23.3    |
| TOTAL          | 791      | 1429    | 1554    | 1562                 | 1564      | 1564      | 1567       | 1567    |

TOTAL NUMBER OF OBS: 6736

PCT FREQ NH <5/8: 76.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 46.6 | 9.7 | 7.6 | 6.0 | 5.8 | 4.4 | 4.9 | 3.7 | 9.1 | .3    | 7088      |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|------|------|------|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | NO PCP | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | * .0 | .1    |              |
|              | TOT %  | * .0 | .0   | .0   | .0   | .0   | * .0 | * .0 | * .0 | * .0 | * .0 | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | .0   | .0   | *     |              |
|              | NO PCP | 1.0  | .7   | .1   | * .1 | .1   | .1   | .1   | .2   | .0   | * .2 | 2.3   |              |
|              | TOT %  | 1.0  | .7   | .1   | * .1 | .1   | .1   | .1   | .2   | .0   | * .2 | 2.3   |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | NO PCP | .9   | .6   | * .* | * .* | * .1 | .1   | .1   | .1   | .0   | * .1 | 1.8   |              |
|              | TOT %  | .9   | .6   | * .* | * .* | * .1 | .1   | .1   | .1   | .0   | * .1 | 1.8   |              |
| 2<5          | PCP    | * .* | * .* | .0   | * .* | .0   | .0   | * .* | * .* | .0   | .0   | *     |              |
|              | NO PCP | 3.9  | 1.4  | .1   | .1   | * .1 | .1   | .1   | .6   | .0   | .2   | 6.5   |              |
|              | TOT %  | 3.9  | 1.4  | .1   | .1   | * .1 | .1   | .1   | .6   | .0   | .2   | 6.6   |              |
| 5<10         | PCP    | .1   | .1   | .1   | * .* | * .* | * .0 | * .* | * .0 | .0   | .0   | .3    |              |
|              | NO PCP | 23.2 | 10.2 | .7   | .2   | .3   | .3   | .9   | 3.7  | .0   | .6   | 40.2  |              |
|              | TOT %  | 23.2 | 10.3 | .8   | .3   | .4   | .4   | .9   | 3.7  | .0   | .6   | 40.5  |              |
| 10+          | PCP    | * .* | .1   | * .* | .0   | .0   | * .* | .0   | .0   | .0   | .0   | .1    |              |
|              | NO PCP | 27.4 | 12.5 | .9   | .5   | .7   | .5   | 1.2  | 4.3  | .0   | .8   | 48.7  |              |
|              | TOT %  | 27.4 | 12.6 | .9   | .5   | .7   | .5   | 1.2  | 4.3  | .0   | .8   | 48.8  |              |
| TOT OBS      |        |      |      |      |      |      |      |      |      |      |      |       |              |
| TOT PCT      |        |      |      |      |      |      |      |      |      |      |      |       |              |
|              |        | 56.4 | 25.6 | 1.9  | .8   | 1.1  | 1.1  | 2.3  | 8.9  | .0   | 1.8  | 100.0 | 8179         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|------|------|------|------|------|------|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | *    | .1    |              |
|              | 4-10       | .0   | * .0 | .0   | .0   | .0   | * .0 | * .0 | * .0 | .0   | *    | *     |              |
|              | 11-21      | * .0 | .0   | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | .0   | *    | *     |              |
|              | 22+        | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | *    | *     |              |
|              | TOT %      | * .* | * .0 | * .* | * .0 | * .0 | * .0 | * .0 | * .0 | * .0 | * .* | .1    |              |
| 1/2<1        | 0-3        | * .* | * .* | * .* | * .0 | * .0 | * .* | * .* | * .* | .0   | *    | .1    |              |
|              | 4-10       | .2   | .1   | * .* | * .0 | * .0 | * .* | .1   | .1   | .0   | *    | .5    |              |
|              | 11-21      | .5   | .3   | * .* | * .0 | .0   | .0   | .0   | .1   | .0   | *    | .9    |              |
|              | 22+        | .1   | .1   | .0   | .0   | .0   | .0   | .0   | * .0 | * .0 | *    | .2    |              |
|              | TOT %      | .8   | .6   | .1   | * .* | * .* | * .1 | .2   | .0   | * .0 | *    | 1.7   |              |
| 1<2          | 0-3        | * .* | * .* | * .0 | * .* | * .* | * .0 | * .* | * .* | .0   | *    | .1    |              |
|              | 4-10       | .2   | .2   | * .* | * .* | * .* | * .* | * .* | * .* | .0   | *    | .6    |              |
|              | 11-21      | .4   | .3   | * .* | * .0 | * .0 | * .* | * .* | * .* | .0   | *    | .8    |              |
|              | 22+        | .1   | * .* | * .* | * .0 | .0   | .0   | .0   | * .0 | * .0 | *    | .1    |              |
|              | TOT %      | .8   | .5   | * .* | * .* | * .* | * .* | * .1 | .0   | * .0 | *    | 1.6   |              |
| 2<5          | 0-3        | .1   | * .* | .0   | * .* | * .* | * .* | * .1 | .0   | .0   | .3   | .6    |              |
|              | 4-10       | .9   | .4   | .1   | * .* | * .* | * .* | .1   | .3   | .0   | *    | 2.0   |              |
|              | 11-21      | 2.1  | .9   | .1   | .0   | * .* | * .* | * .2 | .0   | .0   | *    | 3.3   |              |
|              | 22+        | .6   | .3   | * .* | * .0 | .0   | .0   | * .0 | * .0 | * .0 | *    | .9    |              |
|              | TOT %      | 3.7  | 1.7  | .2   | .1   | * .* | .1   | .2   | .6   | .0   | .3   | 6.8   |              |
| 5<10         | 0-3        | .3   | .2   | .1   | * .* | .1   | .1   | .1   | .2   | .0   | .7   | 1.8   |              |
|              | 4-10       | 5.4  | 3.5  | .5   | .1   | .1   | .2   | .5   | 1.7  | .0   | *    | 12.1  |              |
|              | 11-21      | 12.0 | 6.8  | .3   | * .* | .1   | .1   | .2   | 1.3  | .0   | *    | 20.8  |              |
|              | 22+        | 3.4  | 1.5  | * .* | * .* | * .* | * .* | * .2 | .0   | * .0 | *    | 5.2   |              |
|              | TOT %      | 21.2 | 12.0 | .8   | .2   | .3   | .4   | .8   | 3.4  | .0   | .7   | 39.8  |              |
| 10+          | 0-3        | .6   | .3   | .1   | * .* | .1   | .1   | .1   | .2   | .0   | .9   | 2.5   |              |
|              | 4-10       | 6.9  | 4.5  | .5   | .2   | .4   | .3   | .8   | 2.1  | .0   | *    | 15.8  |              |
|              | 11-21      | 14.8 | 9.0  | .3   | .1   | .1   | .1   | .2   | 1.8  | .0   | *    | 26.5  |              |
|              | 22+        | 3.5  | 1.4  | * .* | * .* | * .* | * .* | * .2 | .0   | * .0 | *    | 5.2   |              |
|              | TOT %      | 25.9 | 15.3 | 1.0  | .4   | .6   | .5   | 1.2  | 4.3  | .0   | .9   | 50.0  |              |
| TOT OBS      |            |      |      |      |      |      |      |      |      |      |      |       |              |
| TOT PCT      |            |      |      |      |      |      |      |      |      |      |      |       |              |
|              |            | 52.4 | 30.1 | 2.1  | .7   | 1.0  | 1.1  | 2.2  | 8.5  | .0   | 1.9  | 100.0 | 11109        |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .4         | .0         | .2         | 2.2        | 4.8          | 3.8          | 2.3          | .6           | .5           | .5    | 15.2  | 84.8               | 1653         |
| 06009         | .9         | .1         | .7         | 4.2        | 9.3          | 7.5          | 3.0          | 1.1          | .6           | 2.8   | 30.2  | 69.8               | 1589         |
| 12015         | .2         | .1         | .6         | 2.9        | 7.4          | 8.4          | 2.7          | .7           | 1.0          | 2.1   | 26.0  | 74.0               | 1897         |
| 18021         | .2         | .1         | .2         | 2.8        | 5.5          | 5.3          | 2.1          | .7           | 1.2          | 1.4   | 19.5  | 80.5               | 1803         |
| TOT           | 26         | 4          | 29         | 208        | 468          | 435          | 176          | 54           | 58           | 119   | 1577  | 5365               | 6942         |
| PCT           | .4         | .1         | .4         | 3.0        | 6.7          | 6.3          | 2.5          | .8           | .8           | 1.7   | 22.7  | 77.3               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | 1.2   | 1.1 | 4.7 | 37.8 | 55.1 | 2537         |
| 06009         | .3   | 2.0   | 1.6 | 5.7 | 39.3 | 51.2 | 2970         |
| 12015         | .2   | 1.4   | 1.6 | 9.2 | 38.9 | 48.7 | 2719         |
| 18021         | .1   | 2.3   | 2.1 | 7.4 | 43.0 | 45.2 | 3110         |
| TOT           | 19   | 198   | 183 | 767 | 4518 | 5651 | 11336        |
| PCT           | .2   | 1.7   | 1.6 | 6.8 | 39.9 | 49.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .4            | .7         | 7.7         | 12.2            | 80.1              | 1592         |
| 06009         | 1.0           | 1.8        | 11.8        | 23.3            | 64.9              | 1541         |
| 12015         | .2            | 1.1        | 13.6        | 20.3            | 66.1              | 1836         |
| 18021         | .2            | .4         | 11.7        | 15.2            | 73.1              | 1767         |
| TOT           | 27            | 65         | 761         | 1196            | 4779              | 6736         |
| PCT           | .4            | 1.0        | 11.3        | 17.8            | 70.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | *     | *     | .0    | .0     | 2            | *           |
| 85/89  | .0   | .0    | *     | .0    | .1    | .2    | .1    | .0     | 29           | .5          |
| 80/84  | .0   | .0    | .0    | .1    | .6    | 4.2   | 4.0   | .9     | 609          | 9.8         |
| 75/79  | .0   | .0    | *     | *     | .6    | 10.0  | 17.6  | 5.5    | 2094         | 33.7        |
| 70/74  | .0   | .0    | .0    | *     | .2    | 4.3   | 25.7  | 14.3   | 2766         | 44.6        |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .2    | 5.0   | 6.2    | 707          | 11.4        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| TOTAL  | 0    | 0     | 2     | 7     | 100   | 1174  | 3255  | 1670   | 6208         | 100.0       |
| PCT    | .0   | .0    | *     | .1    | 1.6   | 18.9  | 52.4  | 26.9   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|-----|-----|-----|-----|-----|------|
| 90/94 | *    | .0   | .0  | .0 | .0  | .0  | *   | .0  | .0  | .0   |
| 85/89 | .1   | .1   | *   | *  | *   | .0  | *   | .1  | .0  | *    |
| 80/84 | 4.1  | 1.8  | .6  | .4 | .3  | .5  | 1.5 | .0  | .3  |      |
| 75/79 | 16.7 | 8.0  | .6  | .3 | .5  | .5  | 5.1 | .0  | .6  |      |
| 70/74 | 27.0 | 13.9 | .6  | .1 | .2  | .2  | 2.2 | .0  | .2  |      |
| 65/69 | 7.4  | 3.2  | .1  | *  | .1  | .1  | .4  | .0  | .1  |      |
| 60/64 | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  |      |
| TOTAL | 55.3 | 26.9 | 1.8 | .7 | 1.1 | 1.0 | 2.4 | 9.4 | .0  | 1.3  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 86  | 81  | 79  | 73  | 68 | 65 | 62  | 73.1 | 3222         |
| 06009         | 94  | 81  | 79  | 73  | 68 | 66 | 59  | 73.1 | 4326         |
| 12015         | 90  | 86  | 83  | 76  | 69 | 67 | 64  | 76.0 | 3345         |
| 18021         | 92  | 85  | 82  | 75  | 69 | 67 | 62  | 75.5 | 4416         |
| TOT           | 94  | 84  | 81  | 74  | 68 | 66 | 59  | 74.4 | 15309        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .1    | .3    | 8.5   | 52.9  | 38.3   | 87   | 1519         |
| 06009         | .0   | .1    | .6    | 8.1   | 49.3  | 41.8   | 88   | 1583         |
| 12015         | .0   | .2    | 3.3   | 34.1  | 50.0  | 12.2   | 82   | 1617         |
| 18021         | .0   | .1    | 2.1   | 23.6  | 56.8  | 17.4   | 83   | 1649         |
| TOT           | 0    | 9     | 101   | 1199  | 3330  | 1729   | 85   | 6368         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

AUGUST

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | *        | *        | 9     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | *        | .1       | .2       | .1       | .0       | 38    | .1       | .4        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .2       | .2       | .1       | *        | 38    | .1       | .4        |
| 7/8                | .0       | .0       | .0       | .2       | .5       | .7       | .4       | .1       | *        | 140   | .2       | 1.7       |
| 6                  | .0       | .0       | .0       | .1       | .6       | .5       | .1       | .1       | .0       | 106   | .1       | 1.3       |
| 5                  | .0       | .0       | *        | .5       | 1.4      | .8       | .4       | .1       | *        | 241   | .3       | 2.9       |
| 4                  | .0       | .0       | .1       | 1.3      | 1.8      | .9       | .3       | .1       | .0       | 342   | .5       | 4.1       |
| 3                  | .0       | .0       | .2       | 2.4      | 2.1      | 1.0      | .6       | .1       | .0       | 481   | .3       | 6.1       |
| 2                  | .0       | .0       | .7       | 4.2      | 2.7      | 1.3      | 1.0      | *        | .0       | 746   | .7       | 9.2       |
| 1                  | .0       | .0       | 1.2      | 5.9      | 3.5      | 1.7      | .9       | *        | .0       | 990   | .6       | 12.5      |
| 0                  | .0       | .0       | 1.3      | 5.6      | 4.0      | 3.6      | .9       | *        | .0       | 1157  | 1.1      | 14.3      |
| -1                 | *        | *        | .5       | 3.4      | 4.6      | 3.8      | .7       | .0       | .0       | 983   | .5       | 12.5      |
| -2                 | .0       | *        | .5       | 2.5      | 3.7      | 3.2      | .4       | *        | .0       | 769   | .6       | 9.6       |
| -3                 | .0       | .1       | .2       | 1.5      | 3.0      | 1.8      | .2       | .0       | .0       | 503   | .2       | 6.5       |
| -4                 | .0       | .1       | .2       | .9       | 2.1      | 1.0      | .1       | .0       | .0       | 331   | .3       | 4.1       |
| -5                 | .0       | *        | .2       | .9       | 1.7      | .5       | *        | .0       | .0       | 247   | .3       | 3.0       |
| -6                 | .0       | .0       | .1       | .5       | .7       | .2       | .0       | .0       | .0       | 114   | .1       | 1.4       |
| -7/-8              | *        | .1       | .4       | .9       | .6       | .2       | .0       | .0       | .0       | 164   | .1       | 2.1       |
| -9/-10             | .0       | .1       | .2       | .3       | .3       | *        | .0       | .0       | .0       | 71    | .2       | .8        |
| -11/-13            | .0       | *        | .2       | .1       | *        | *        | .0       | .0       | .0       | 34    | .1       | .4        |
| -14/-16            | .0       | *        | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 10    | *        | .1        |
| -17/-19            | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | *         |
| TOTAL              | 2        |          | 456      |          | 2512     |          | 471      | 6        |          | 7520  | 473      | 7047      |
| PCT                | *        | .4       | 33       | 2357     | 1621     | 62       | .8       | .1       |          | 100.0 | 6.3      | 93.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE  |      |       |       |       |     |    | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |      |
| <1      | .3  | 2.0  | .1    | .0    | .0    | .0  | 2.5  | .1  | .6  | .1   | .0    | .0    | .0    | .0  | .0 | .8   |
| 1-2     | .3  | 6.8  | 5.0   | .0    | .0    | .0  | 12.1 | .3  | 2.8 | 2.0  | .0    | .0    | .0    | .0  | .0 | 5.1  |
| 3-4     | .1  | 4.5  | 12.2  | 1.3   | .0    | .0  | 18.0 | .0  | 1.9 | 4.6  | .2    | .0    | .0    | .0  | .0 | 6.7  |
| 5-6     | *   | .8   | 11.0  | 2.3   | .1    | .0  | 14.3 | .0  | .5  | 4.9  | .7    | *     | .0    | .0  | .0 | 6.2  |
| 7       | .1  | .2   | 4.7   | 2.6   | *     | .0  | 7.7  | .0  | *   | 2.1  | .5    | .0    | .0    | .0  | .0 | 2.7  |
| 8-9     | .0  | .2   | 1.5   | 1.7   | .0    | .0  | 3.4  | .0  | *   | .6   | .4    | .0    | .0    | .0  | .0 | 1.0  |
| 10-11   | .0  | .0   | .5    | 1.2   | .0    | .0  | 1.7  | .0  | .0  | .3   | .3    | .0    | .0    | .0  | .0 | .6   |
| 12      | .0  | .0   | .1    | .2    | *     | .0  | .3   | .0  | .0  | .1   | .1    | .0    | .0    | .0  | .0 | .1   |
| 13-16   | .0  | .0   | .1    | .2    | *     | .0  | .3   | .0  | .0  | *    | *     | .0    | .0    | .0  | .0 | .1   |
| 17-19   | .0  | *    | .0    | *     | .1    | .0  | .1   | .0  | .0  | .0   | *     | *     | .0    | .0  | .0 | .1   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| TOT PCT | .9  | 14.5 | 35.2  | 9.6   | .2    | .0  | 60.4 | .4  | 5.9 | 14.7 | 2.4   | *     | .0    | .0  | .0 | 23.4 |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | *   | .1   | *     | .0    | .0    | .0  | .2  | *   | .1  | .0   | .0    | .0    | .0    | .0  | .0 | .2  |
| 1-2     | .1  | .5   | .1    | .0    | .0    | .0  | .7  | *   | .1  | *    | .0    | .0    | .0    | .0  | .0 | .1  |
| 3-4     | .0  | .2   | .1    | .0    | .0    | .0  | .4  | .0  | .1  | *    | .0    | .0    | .0    | .0  | .0 | .1  |
| 5-6     | .0  | *    | .1    | *     | .0    | .0  | .1  | .0  | .0  | *    | .0    | .0    | .0    | .0  | .0 | *   |
| 7       | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0  | .0   | *     | .0    | .0    | .0  | .0 | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .1  | .8   | .4    | .1    | .0    | .0  | 1.5 | .1  | .3  | .1   | *     | .0    | .0    | .0  | .0 | .5  |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CDNT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .3  | .1  | *    | .0    | .0    | .0    | .0  | .1  |
| 1-2     | *   | .2   | .0    | .0    | .0    | .0  | .3  | *   | .2   | *     | .0    | .0    | .0  | .3  |
| 3-4     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | *    | .1    | *     | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .4   | .1    | *     | .0    | .0  | .7  | .1  | .4   | .2    | *     | .0    | .0  | .7  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .3  | .5   | .1    | .0    | .0    | .0  | .8  |           |
| 1-2     | *   | .7   | *     | .0    | .0    | .0  | .8  | .1  | 2.3  | 1.0   | .0    | .0    | .0  | 3.5 |           |
| 3-4     | .0  | .3   | .3    | *     | .0    | .0  | .6  | .0  | .8   | 1.3   | .1    | .0    | .0  | 2.1 |           |
| 5-6     | .0  | .1   | .2    | *     | .0    | .0  | .3  | .0  | .1   | 1.0   | .1    | .0    | .0  | 1.2 |           |
| 7       | .0  | .0   | *     | *     | .0    | .0  | *   | *   | .0   | .3    | .1    | .0    | .0  | .4  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .1    | .0    | .0  | .1  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | .1  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | 1.3  | .5    | .1    | .0    | .0  | 2.0 | .4  | 3.7  | 3.8   | .4    | .0    | .0  | 8.3 | 97.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.1 | 3.7  | .3    | .0    | .0    | .0  | 8.1   |         |
| 1-2     | 1.1 | 13.6 | 8.2   | .0    | .0    | .0  | 22.9  |         |
| 3-4     | .1  | 7.9  | 18.5  | 1.6   | .0    | .0  | 28.1  |         |
| 5-6     | *   | 1.5  | 17.2  | 3.2   | .1    | .0  | 22.1  |         |
| 7       | .1  | .2   | 7.1   | 3.4   | *     | .0  | 10.8  |         |
| 8-9     | .0  | .2   | 2.2   | 2.1   | .0    | .0  | 4.5   |         |
| 10-11   | .0  | .0   | .8    | 1.6   | .0    | .0  | 2.4   |         |
| 12      | .0  | .0   | .2    | .3    | *     | .0  | .5    |         |
| 13-16   | .0  | .0   | .1    | .2    | *     | .0  | .4    |         |
| 17-19   | .0  | .0   | *     | *     | .1    | .0  | .2    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    | 4528    |
| TOT PCT | 5.4 | 27.3 | 54.5  | 12.5  | .3    | .0  | 100.0 |         |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <5           | .9  | 8.1  | 11.4 | 8.7  | 4.7  | 1.9 | .6    | .1  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 2016     |
| 5-7          | .0  | 1.1  | 5.0  | 9.3  | 6.3  | 3.4 | 1.6   | .6  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1528     |
| 8-9          | .0  | .3   | 1.5  | 2.9  | 3.2  | 2.5 | 1.3   | .5  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 689      |
| 10-11        | .0  | .2   | .5   | .7   | .7   | .4  | .5    | .2  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 187      |
| 12-13        | .0  | .0   | .5   | .5   | .3   | .1  | *     | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 85       |
| >13          | .0  | .0   | .0   | .2   | .1   | *   | .1    | .0  | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 23       |
| INDET        | 2.3 | 3.2  | 4.2  | 3.7  | 2.7  | 1.1 | .6    | .1  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 996      |
| TOTAL        | 177 | 717  | 1281 | 1440 | 985  | 517 | 256   | 91  | 44    | 15    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 5524     |
| PCT          | 3.2 | 13.0 | 23.2 | 26.1 | 17.8 | 9.4 | 4.6   | 1.6 | .8    | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |

SEPTEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .2                 | .1        | .2   | .0        | .0   | .0              | .0   | .4                      | .3             | 1.3       | 5.1         | .2                  | 7.3        | 1.2             | 84.3       |
| NE       | .4                 | .2        | .3   | .0        | .0   | .0              | .0   | .9                      | .3             | 1.4       | 4.0         | *                   | 6.0        | .9              | 86.5       |
| E        | 5.3                | 2.0       | .5   | .0        | .0   | .0              | .0   | 7.8                     | 2.5            | 3.3       | 2.5         | .0                  | 5.3        | .0              | 80.4       |
| SE       | 5.3                | .5        | .9   | .0        | .0   | .0              | .0   | 5.8                     | .7             | 1.4       | .5          | .0                  | 7.9        | .9              | 83.3       |
| S        | 1.9                | 1.1       | .0   | .0        | .0   | .0              | .0   | 3.0                     | 1.9            | 2.2       | 4.7         | .0                  | 3.6        | .0              | 84.6       |
| SW       | 1.4                | .0        | .0   | .0        | .0   | .0              | .0   | 1.4                     | 1.8            | .0        | 3.2         | .0                  | 8.1        | .0              | 85.6       |
| W        | .7                 | 1.0       | .0   | .0        | .0   | .0              | .0   | 1.7                     | .7             | .5        | 1.3         | .0                  | 11.1       | .0              | 84.7       |
| NW       | .2                 | .3        | .0   | .0        | .0   | .0              | .0   | .5                      | .1             | 1.8       | 4.0         | .0                  | 8.2        | 1.2             | 84.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .6   | .0        | .0   | .0              | .0   | .6                      | .0             | .6        | 11.0        | .0                  | 3.2        | .6              | 83.9       |
| TOT PCT  | .5                 | .2        | .2   | .0        | .0   | .0              | .0   | .9                      | .4             | 1.4       | 4.6         | .1                  | 6.8        | 1.0             | 84.9       |
| TOT OBS: | 7693               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THOR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .8                 | .4        | .2   | .0        | .0   | .0              | .0   | 1.4                     | .3             | 3.1       | 3.0         | .1                  | 5.2        | .8              | 86.4       |
| 06009      | .7                 | .3        | .3   | .0        | .0   | .0              | .0   | 1.2                     | .9             | 2.4       | 4.2         | .2                  | 4.8        | .9              | 85.5       |
| 12015      | .2                 | .2        | .2   | .0        | .0   | .0              | .0   | .6                      | .1             | *         | 5.6         | .2                  | 8.6        | 1.2             | 83.7       |
| 18021      | .3                 | *         | .2   | .0        | .0   | .0              | .0   | .5                      | .1             | .3        | 5.8         | *                   | 8.8        | 1.2             | 83.3       |
| TOT PCT    | .5                 | .2        | .2   | .0        | .0   | .0              | .0   | .9                      | .4             | 1.4       | 4.7         | .1                  | 6.9        | 1.0             | 84.7       |
| TOT OBS:   | 7858               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    |
| N        | 1.1                | 13.4 | 24.3  | 4.6   | .1    | .0  |       | 43.5      | 13.7     |          | 46.1       | 47.9  | 42.6  | 34.0  | 42.4  | 57.4  |
| NE       | .9                 | 10.5 | 24.3  | 4.8   | .1    | .0  |       | 40.6      | 14.3     |          | 38.4       | 33.0  | 42.4  | 51.2  | 41.8  | 30.2  |
| E        | .3                 | 1.6  | 1.4   | .2    | *     | .0  |       | 3.5       | 10.8     |          | 2.7        | 3.4   | 3.5   | 5.2   | 3.8   | .7    |
| SE       | .2                 | .7   | .4    | .1    | *     | .0  |       | 1.4       | 10.3     |          | .9         | 2.6   | 1.0   | 2.1   | 1.9   | 3.4   |
| S        | .3                 | .6   | .2    | *     | .0    | .0  |       | 1.1       | 7.9      |          | 1.0        | .3    | 1.0   | .9    | 1.2   | .5    |
| SW       | .1                 | .5   | .1    | *     | *     | .0  |       | .8        | 7.9      |          | .9         | .2    | .6    | .4    | .6    | .8    |
| W        | .4                 | 1.1  | .2    | *     | .0    | .0  |       | 1.7       | 6.9      |          | 1.6        | 1.9   | 1.5   | 1.5   | 1.6   | 2.3   |
| NW       | .4                 | 3.2  | 1.8   | .1    | *     | .0  |       | 5.6       | 9.7      |          | 5.8        | 7.9   | 5.6   | 4.0   | 5.2   | 4.5   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.8                |      |       |       |       |     |       | 1.8       | .0       |          | 2.5        | 2.7   | 1.9   | .7    | 1.6   | .0    |
| TOT OBS  | 775                | 4513 | 7510  | 1392  | 34    | 0   | 14224 |           | 13.1     |          | 2781       | 146   | 2828  | 1241  | 3009  | 149   |
| TOT PCT  | 5.4                | 31.7 | 52.8  | 9.8   | .2    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 06    | 12    | 18    |
| N        | 5.1                | 23.9 | 13.8  | .8    | .0  |       |  | 43.5      | 13.7     |          | 46.2       | 39.9  | 43.1  | 45.6  |
| NE       | 3.8                | 21.5 | 14.5  | .8    | *   |       |  | 40.6      | 14.3     |          | 38.2       | 45.1  | 41.2  | 37.5  |
| E        | 1.0                | 1.9  | .6    | *     | .0  |       |  | 3.5       | 10.8     |          | 2.7        | 4.0   | 3.6   | 3.4   |
| SE       | .5                 | .6   | .2    | .1    | *   |       |  | 1.4       | 10.3     |          | 1.0        | 1.3   | 2.0   | 1.2   |
| S        | .6                 | .4   | .1    | *     | .0  |       |  | 1.1       | 7.9      |          | 1.0        | 1.0   | 1.2   | 1.2   |
| SW       | .4                 | .3   | .1    | *     | *   |       |  | .8        | 7.9      |          | .9         | .5    | .6    | 1.1   |
| W        | 1.0                | .7   | *     | *     | .0  |       |  | 1.7       | 6.9      |          | 1.6        | 1.5   | 1.6   | 2.2   |
| NW       | 1.6                | 3.4  | .6    | *     | .0  |       |  | 5.6       | 9.7      |          | 5.9        | 5.1   | 5.2   | 6.1   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | 1.8                |      |       |       |     |       |  | 1.8       | .0       |          | 2.5        | 1.6   | 1.5   | 1.8   |
| TOT OBS  | 2243               | 7492 | 4250  | 235   | 4   | 14224 |  |           | 13.1     |          | 2927       | 4069  | 3158  | 4070  |
| TOT PCT  | 15.8               | 52.7 | 29.9  | 1.7   | *   |       |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOURL | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003 | 2.5  | 2.9 | 31.5 | 52.6  | 10.2  | .3    | .0  | 13.3 | 100.0    | 2927      |
| 06009 | 1.6  | 3.3 | 32.1 | 52.6  | 10.1  | .2    | .0  | 13.1 | 100.0    | 4069      |
| 12015 | 1.5  | 4.0 | 32.6 | 51.9  | 9.8   | .3    | .0  | 13.0 | 100.0    | 3158      |
| 18021 | 1.8  | 4.2 | 30.0 | 53.8  | 9.1   | .1    | .0  | 12.9 | 100.0    | 4070      |
| TOT   | 259  | 510 | 4513 | 7510  | 1392  | 34    | 0   | 13.1 |          | 14224     |
| PCT   | 1.8  | 3.6 | 31.7 | 52.8  | 9.8   | .2    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBS | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|---------|-----------|------------------|
| N        | 33.8 | 5.8  | 8.4  | 4.6     |           | 2.2              |
| NE       | 18.5 | 3.7  | 5.9  | 3.0     |           | 2.6              |
| E        | 1.0  | .3   | .7   | .4      |           | 4.0              |
| SE       | .4   | .2   | .3   | .4      |           | 4.7              |
| S        | .5   | .1   | .3   | .2      |           | 3.6              |
| SW       | .4   | .2   | .1   | .1      |           | 3.4              |
| W        | .7   | .4   | .6   | .3      |           | 3.8              |
| NW       | 3.9  | .7   | 1.3  | .5      |           | 2.5              |
| VAR      | .0   | .0   | .0   | .0      |           | .0               |
| CALM     | 1.4  | .2   | .3   | .2      |           | 2.3              |
| TOT OBS  | 3810 | 726  | 1139 | 612     | 6287      | 2.5              |
| TOT PCT  | 60.6 | 11.5 | 18.1 | 9.7     | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | OBS             |       |
| .3  | *   | .1  | .6  | 2.2  | 2.3  | 1.0  | .5   | .5   | 1.3   | 43.7            |       |
| .2  | .0  | .1  | .5  | 1.9  | 1.3  | .7   | .3   | .3   | .8    | 25.0            |       |
| .0  | .0  | .0  | .2  | .2   | .3   | .1   | .0   | .0   | .1    | 1.5             |       |
| *   | .0  | *   | .1  | .1   | .1   | *    | *    | *    | *     | .8              |       |
| .0  | .0  | *   | .1  | *    | *    | .0   | *    | *    | *     | .8              |       |
| .0  | .0  | .0  | .1  | .2   | .1   | .1   | *    | *    | .1    | 1.4             |       |
| *   | .0  | .2  | .3  | .3   | .2   | .1   | .1   | .2   | .2    | 5.1             |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |       |
| *   | .0  | *   | .1  | .2   | .0   | *    | *    | *    | *     | 1.6             |       |
| 40  | 2   | 18  | 107 | 328  | 301  | 135  | 66   | 58   | 160   | 5072            | 6287  |
| .6  | *   | .3  | 1.7 | 5.2  | 4.8  | 2.1  | 1.0  | .9   | 2.5   | 80.7            | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| * OR >6500     | 1.8       | 3.3  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5   | 3.5  |
| * OR >5000     | 2.4       | 4.3  | 4.6  | 4.6  | 4.6  | 4.6  | 4.6   | 4.6  |
| * OR >3500     | 3.7       | 6.2  | 6.7  | 6.7  | 6.7  | 6.7  | 6.7   | 6.7  |
| * OR >2000     | 5.8       | 10.1 | 11.4 | 11.4 | 11.4 | 11.4 | 11.5  | 11.5 |
| * OR >1000     | 9.1       | 15.1 | 16.5 | 16.6 | 16.6 | 16.6 | 16.7  | 16.7 |
| * OR >600      | 9.9       | 16.7 | 18.2 | 18.3 | 18.3 | 18.3 | 18.4  | 18.4 |
| * OR >300      | 10.0      | 16.9 | 18.5 | 18.5 | 18.5 | 18.6 | 18.6  | 18.6 |
| * OR >150      | 10.0      | 16.9 | 18.5 | 18.5 | 18.6 | 18.6 | 18.7  | 18.7 |
| * OR >0        | 10.0      | 17.1 | 18.9 | 18.9 | 19.0 | 19.1 | 19.3  | 19.3 |
| TOTAL          | 636       | 1086 | 1204 | 1206 | 1209 | 1218 | 1229  | 1229 |

TOTAL NUMBER OF OBS: 6368

PCT FREQ NH <5/8: 80.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 8 OBS | TOTAL OBS |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 51.3 | 9.9 | 7.4 | 6.0 | 5.0 | 3.5 | 5.0 | 4.4 | 6.8 | .6    | 6704      |



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(OVER-ALL) 1855-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | *    | .0   | .0  | .0  | .0  | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .1   | .1   | *   | .0  | .0  | .0 | .0  | *   | .0  | *    | .3    |              |
|              | TOT %  | .1   | .1   | *   | .0  | .0  | .0 | .0  | *   | .0  | *    | .3    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | *   | .0  | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .7   | .4   | *   | *   | *   | *  | *   | .1  | .0  | .0   | 1.2   |              |
|              | TOT %  | .7   | .4   | *   | *   | *   | *  | *   | .1  | .0  | .0   | 1.2   |              |
| 1<2          | PCP    | .0   | *    | .0  | .0  | .0  | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .6   | .4   | .1  | *   | *   | *  | *   | .1  | .0  | *    | 1.2   |              |
|              | TOT %  | .6   | .5   | .1  | *   | *   | *  | *   | .1  | .0  | *    | 1.2   |              |
| 2<5          | PCP    | .1   | *    | *   | *   | *   | .0 | *   | *   | .0  | .0   | .2    |              |
|              | NO PCP | 3.2  | 1.4  | *   | *   | *   | .1 | .1  | .5  | .0  | .3   | 5.7   |              |
|              | TOT %  | 3.3  | 1.5  | .1  | *   | *   | .1 | .1  | .5  | .0  | .3   | 5.8   |              |
| 5<10         | PCP    | .1   | .1   | .1  | *   | *   | *  | *   | *   | .0  | *    | .4    |              |
|              | NO PCP | 18.6 | 10.5 | .8  | .5  | .4  | .4 | .7  | 2.3 | .0  | .6   | 34.7  |              |
|              | TOT %  | 18.6 | 10.6 | .9  | .5  | .5  | .4 | .7  | 2.3 | .0  | .6   | 35.1  |              |
| 10+          | PCP    | .1   | .1   | .1  | *   | .0  | .0 | .0  | *   | .0  | .0   | .3    |              |
|              | NO PCP | 27.8 | 19.1 | 1.5 | .8  | .6  | .5 | 1.1 | 3.6 | .0  | 1.1  | 56.0  |              |
|              | TOT %  | 27.8 | 19.2 | 1.5 | .8  | .6  | .5 | 1.1 | 3.6 | .0  | 1.1  | 56.3  |              |
| TOT OBS      |        | 7686 |      |     |     |     |    |     |     |     |      |       |              |
| TOT PCT      |        | 51.1 | 32.2 | 2.6 | 1.4 | 1.2 | .9 | 2.0 | 6.6 | .0  | 2.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N     | NE   | E   | SE  | S   | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|-------|------|-----|-----|-----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0    | .0   | .0  | .0  | *   | .0 | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | .1    | *    | .0  | .0  | .0  | *  | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | *     | .1   | *   | .0  | .0  | .0 | .0  | *   | .0  | .0   | .1    |              |
|              | 22+        | .0    | .0   | .0  | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1    | .1   | *   | .0  | *   | .0 | *   | *   | .0  | *    | .3    |              |
| 1/2<1        | 0-3        | *     | *    | *   | .0  | *   | *  | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | .1    | .1   | *   | *   | *   | .0 | *   | *   | .0  | .0   | .3    |              |
|              | 11-21      | .3    | .1   | *   | *   | *   | *  | *   | *   | .0  | .0   | .4    |              |
|              | 22+        | .1    | *    | *   | .0  | .0  | .0 | .0  | *   | .0  | .0   | .1    |              |
|              | TOT %      | .5    | .3   | *   | *   | *   | *  | *   | .1  | .0  | .0   | .9    |              |
| 1<2          | 0-3        | *     | *    | *   | *   | *   | *  | *   | *   | .0  | *    | .1    |              |
|              | 4-10       | .2    | .1   | *   | *   | *   | *  | *   | *   | .0  | .0   | .4    |              |
|              | 11-21      | .2    | .3   | *   | .0  | .0  | .0 | .0  | *   | .0  | .0   | .6    |              |
|              | 22+        | .1    | *    | .0  | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .5    | .4   | .1  | *   | *   | *  | .1  | .1  | .0  | *    | 1.2   |              |
| 2<5          | 0-3        | .1    | .1   | *   | *   | *   | .0 | *   | .1  | .0  | .3   | .6    |              |
|              | 4-10       | .9    | .4   | .1  | *   | *   | .1 | .1  | .3  | .0  | .0   | 1.9   |              |
|              | 11-21      | 1.4   | 1.1  | .1  | *   | *   | *  | .0  | .1  | .0  | .0   | 2.7   |              |
|              | 22+        | .4    | .2   | .0  | *   | *   | .0 | .0  | *   | .0  | .0   | .6    |              |
|              | TOT %      | 2.8   | 1.8  | .2  | .1  | .1  | .1 | .1  | .5  | .0  | .3   | 5.8   |              |
| 5<10         | 0-3        | .4    | .3   | .1  | .1  | .1  | .1 | .1  | .2  | .0  | .5   | 1.9   |              |
|              | 4-10       | 5.1   | 2.8  | .5  | .2  | .2  | .2 | .4  | 1.3 | .0  | .0   | 10.7  |              |
|              | 11-21      | 9.6   | 7.1  | .4  | .1  | .1  | .1 | .1  | .7  | .0  | .0   | 18.2  |              |
|              | 22+        | 1.7   | 1.4  | *   | .1  | *   | *  | .0  | *   | .0  | .0   | 3.3   |              |
|              | TOT %      | 16.8  | 11.6 | 1.0 | .5  | .4  | .3 | .7  | 2.2 | .0  | .5   | 34.1  |              |
| 10+          | 0-3        | .7    | .5   | .2  | *   | .1  | .1 | .2  | .2  | .0  | 1.0  | 3.0   |              |
|              | 4-10       | 8.2   | 6.2  | 1.0 | .5  | .4  | .3 | .6  | 1.9 | .0  | .0   | 19.1  |              |
|              | 11-21      | 15.2  | 13.3 | .6  | .2  | .2  | .1 | .2  | 1.1 | .0  | .0   | 31.0  |              |
|              | 22+        | 2.4   | 2.1  | .1  | *   | *   | *  | .0  | *   | .1  | .0   | 4.7   |              |
|              | TOT %      | 26.6  | 22.1 | 1.8 | .8  | .6  | .4 | 1.0 | 3.3 | .0  | 1.0  | 57.7  |              |
| TOT OBS      |            | 10480 |      |     |     |     |    |     |     |     |      |       |              |
| TOT PCT      |            | 47.2  | 36.3 | 3.1 | 1.4 | 1.2 | .9 | 1.8 | 6.1 | .0  | 1.9  | 100.0 |              |

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PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+      | TOTAL        | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|---------------------|---------------|
| 00003         | .8         | .0         | .3         | 1.6        | 4.7          | 3.4          | 1.9          | .8           | .5           | 1.9        | 15.7         | 84.3                | 1543          |
| 06009         | .8         | .0         | .3         | 2.2        | 6.0          | 5.5          | 1.6          | 1.2          | .9           | 2.9        | 21.4         | 78.6                | 1536          |
| 12015         | .6         | .1         | .3         | 1.4        | 4.9          | 5.7          | 2.4          | 1.1          | .8           | 2.5        | 19.8         | 80.2                | 1800          |
| 18021         | .4         | .0         | .3         | 1.5        | 4.6          | 4.0          | 2.3          | 1.0          | 1.3          | 2.8        | 18.1         | 81.9                | 1692          |
| TOT<br>PCT    | 41<br>.6   | 2<br>*     | 18<br>.3   | 108<br>1.6 | 391<br>5.0   | 307<br>4.7   | 135<br>2.1   | 69<br>1.1    | 58<br>.9     | 166<br>2.5 | 1235<br>18.8 | 5336<br>81.2        | 6571<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2     | 1/2<1      | 1<2        | 2<5        | 5<10         | 10+          | TOTAL<br>OBS   |
|---------------|----------|------------|------------|------------|--------------|--------------|----------------|
| 00003         | .3       | .7         | .6         | 4.1        | 33.7         | 60.6         | 2347           |
| 06009         | .4       | 1.3        | 1.0        | 4.8        | 34.1         | 58.5         | 2848           |
| 12015         | .4       | .7         | 1.2        | 8.3        | 34.6         | 54.8         | 2561           |
| 18021         | .2       | 1.4        | 1.7        | 5.8        | 33.9         | 57.0         | 2888           |
| TOT<br>PCT    | 32<br>.3 | 111<br>1.0 | 123<br>1.2 | 614<br>5.8 | 3629<br>34.1 | 6135<br>57.6 | 10644<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS  |
|---------------|---------------|------------|-------------|-----------------|--------------------|---------------|
| 00003         | .7            | 1.2        | 6.0         | 12.9            | 81.0               | 1477          |
| 06009         | .9            | 1.4        | 8.3         | 17.5            | 74.2               | 1476          |
| 12015         | .6            | 1.2        | 11.0        | 15.4            | 73.5               | 1761          |
| 18021         | .4            | .9         | 9.4         | 14.5            | 76.1               | 1654          |
| TOT<br>PCT    | 40<br>.6      | 75<br>1.2  | 561<br>8.8  | 961<br>15.1     | 4846<br>76.1       | 6368<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | *     | *     | *     | .0     | 3            | .1          |
| 85/89  | .0   | *     | .0    | *     | .3    | .7    | .2    | *      | 73           | 1.3         |
| 80/84  | .0   | .0    | *     | .1    | .9    | 7.3   | 6.8   | 1.1    | 906          | 16.1        |
| 75/79  | .0   | .0    | .0    | .1    | 1.0   | 11.4  | 16.5  | 4.6    | 1894         | 33.6        |
| 70/74  | .0   | .0    | .0    | .0    | .3    | 5.8   | 22.7  | 11.4   | 2262         | 40.1        |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .2    | 3.4   | 5.2    | 499          | 8.8         |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | *      | 2            | *           |
| TOTAL  | 0    | 1     | 2     | 9     | 138   | 1432  | 2798  | 1259   | 5639         | 100.0       |
| PCT    | .0   | *     | *     | .2    | 2.4   | 25.4  | 49.6  | 22.3   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 90/94 | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| 85/89 | .0   | .4   | *   | .1  | *   | *   | *   | .1  | .0  | .0   |
| 80/84 | 7.0  | 3.4  | .8  | .5  | .5  | .9  | 1.8 | .0  | .3  |      |
| 75/79 | 15.6 | 11.0 | 1.2 | .6  | .3  | .3  | 1.0 | 3.2 | .0  | .4   |
| 70/74 | 21.4 | 15.1 | .7  | .2  | .2  | .2  | .4  | 1.6 | .0  | .4   |
| 65/69 | 4.6  | 3.8  | .2  | .0  | .1  | *   | *   | .2  | .0  | *    |
| 60/64 | *    | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| TOTAL | 49.3 | 33.7 | 2.8 | 1.6 | 1.1 | 1.1 | 2.4 | 6.9 | .0  | 1.2  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 93  | 82  | 81  | 74  | 68 | 64 | 57  | 73.9 | 2962         |
| 06009         | 92  | 82  | 81  | 74  | 68 | 64 | 59  | 73.9 | 4085         |
| 12015         | 96  | 87  | 84  | 77  | 70 | 66 | 63  | 76.7 | 3099         |
| 18021         | 96  | 86  | 83  | 76  | 70 | 68 | 60  | 76.4 | 4021         |
| TOT           | 96  | 86  | 82  | 75  | 68 | 65 | 57  | 75.2 | 14167        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 1.3   | 16.5  | 52.2  | 30.0   | 85   | 1376         |
| 06009         | .0   | .2    | 1.0   | 14.1  | 51.3  | 33.4   | 86   | 1459         |
| 12015         | .0   | .4    | 4.3   | 39.0  | 45.2  | 11.1   | 81   | 1427         |
| 18021         | .0   | .2    | 3.1   | 31.2  | 50.0  | 15.5   | 82   | 1490         |
| TOT           | 0    | 12    | 139   | 1454  | 2856  | 1291   | 84   | 5752         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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20.4N 18.0W

TABLE 17

| PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)<br>VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F) |          |          |          |          |          |          |          |          |          |     |       |          |           |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| AIR-SEA<br>TMP DIF   | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | W<br>FOG | WD<br>FOG |
| 23/25  | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 2     | .0       | *         |
| 20/22  | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 2     | .0       | *         |
| 17/19  | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0  | 7     | .0       | .1        |
| 14/16  | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0       | .0       | .0  | 11    | .0       | .2        |
| 11/13  | .0       | .0       | .0       | .0       | .0       | .2       | .3       | .1       | .0       | *   | 43    | *        | .6        |
| 9/10   | .0       | .0       | .0       | .0       | *        | .5       | .3       | *        | .1       | .0  | 66    | .1       | .9        |
| 7/8  | .0       | .0       | .0       | .1       | .7       | .9       | .4       | .1       | .1       | .0  | 159   | .2       | 2.1       |
| 6  | .0       | .0       | .0       | .1       | .7       | .8       | .2       | .1       | *        | .0  | 118   | .1       | 1.6       |
| 5  | .0       | .0       | .0       | .4       | 1.8      | .8       | .4       | .2       | *        | .0  | 254   | .4       | 3.2       |
| 4  | .0       | .0       | *        | 1.4      | 1.8      | 1.1      | .5       | .2       | .0       | .0  | 347   | .5       | 4.5       |
| 3  | .0       | .0       | .1       | 2.2      | 2.1      | .8       | .5       | .2       | .0       | .0  | 413   | .4       | 5.5       |
| 2  | .0       | .0       | .3       | 4.4      | 2.3      | 1.1      | 1.2      | .1       | .0       | .0  | 660   | .7       | 8.7       |
| 1  | .0       | .0       | .9       | 6.0      | 3.7      | 2.3      | 1.7      | .1       | .0       | .0  | 1028  | .6       | 14.1      |
| 0  | .0       | .0       | 1.2      | 4.7      | 3.5      | 3.0      | 1.9      | *        | *        | .0  | 1005  | .8       | 13.6      |
| -1   | .0       | .0       | .5       | 3.9      | 3.6      | 3.2      | 1.2      | .0       | .0       | .0  | 876   | .5       | 12.0      |
| -2   | .0       | .0       | .7       | 2.1      | 2.7      | 3.1      | .5       | .0       | .0       | .0  | 633   | .3       | 8.7       |
| -3   | .0       | .0       | .6       | 1.3      | 2.3      | 2.4      | .1       | .0       | .0       | .0  | 471   | .1       | 6.6       |
| -4   | .0       | .0       | .6       | 1.1      | 1.7      | 1.1      | .1       | .0       | .0       | .0  | 328   | .1       | 4.5       |
| -5   | .0       | .2       | .7       | .7       | 1.3      | .6       | .1       | .0       | .0       | .0  | 257   | .1       | 3.6       |
| -6   | .0       | .3       | .2       | .3       | .6       | .3       | *        | .0       | .0       | .0  | 117   | *        | 1.6       |
| -7/-8  | .0       | .2       | .4       | .5       | .4       | .2       | *        | .0       | .0       | .0  | 116   | .1       | 1.6       |
| -9/-10   | *        | .3       | .2       | .3       | .2       | *        | .0       | .0       | .0       | .0  | 70    | .1       | .9        |
| -11/-13  | .0       | .1       | .1       | .1       | *        | .0       | .0       | .0       | .0       | .0  | 29    | *        | .4        |
| -14/-16  | .1       | .1       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0  | 11    | .0       | .2        |
| -17/-19  | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 2     | .0       | *         |
| TOTAL  | 8        | 79       | 451      | 2071     | 2077     | 1555     | 669      | 92       | 18       | 5   | 7025  | 356      | 6669      |
| PCT  | .1       | 1.1      | 6.4      | 29.5     | 29.6     | 22.1     | 9.5      | 1.3      | .3       | .1  | 100.0 | 5.1      | 94.9      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      |     |      |       |       |       |     |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |
| <1      | .4  | 2.1  | .3    | .0    | .0    | .0  | 2.8  | .3  | .9   | .1    | .0    | .0    | .0  |
| 1-2     | .3  | 8.4  | 5.2   | .0    | .0    | .0  | 13.0 | .2  | 3.7  | 3.0   | .0    | .0    | .0  |
| 3-4     | .1  | 4.9  | 11.1  | .6    | .0    | .0  | 16.7 | .1  | 1.9  | 5.8   | .5    | .0    | .0  |
| 5-6     | .0  | 1.2  | 8.9   | 1.2   | *     | .0  | 11.3 | .0  | .7   | 5.2   | .9    | *     | .0  |
| 7       | .0  | .4   | 4.4   | 1.5   | .0    | .0  | 6.3  | .0  | .2   | 3.2   | .9    | .0    | .0  |
| 8-9     | .0  | *    | 1.4   | .9    | .0    | .0  | 2.4  | .0  | *    | .4    | .5    | *     | .0  |
| 10-11   | .0  | *    | .3    | 1.0   | .1    | .0  | 1.4  | .0  | *    | .2    | .3    | *     | .0  |
| 12      | .0  | .0   | .2    | .2    | .0    | .0  | .4   | .0  | .0   | *     | .2    | .0    | .0  |
| 13-16   | .0  | .0   | .1    | .2    | .0    | .0  | .2   | .0  | .0   | .1    | .1    | *     | .0  |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |
| TOT PCT | .8  | 17.1 | 31.9  | 5.6   | .1    | .0  | 55.5 | .7  | 7.6  | 18.0  | 3.4   | .1    | .0  |

| SE      |     |      |       |       |       |     |     |     |      |       |       |       |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |
| <1      | .1  | .1   | *     | .0    | .0    | .0  | .2  | *   | .1   | *     | .0    | .0    | .0  |
| 1-2     | .0  | .4   | .2    | .0    | .0    | .0  | .6  | *   | .3   | .1    | .0    | .0    | .0  |
| 3-4     | .0  | .2   | .4    | *     | .0    | .0  | .6  | .0  | .1   | *     | *     | .0    | .0  |
| 5-6     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | *    | .1    | .0    | *     | .0  |
| 7       | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .1    | .1    | .0    | .0  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | *     | *     | .0  |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | *     | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |
| TOT PCT | .1  | .8   | 1.0   | *     | .0    | .0  | 1.9 | .1  | .5   | .3    | .1    | .1    | .0  |



PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .2   | .0    | .0    | .0    | .0  | .2  | .1  | .2   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | *   | .3   | .1    | .0    | .0    | .0  | .5  | .1  | .2   | *     | .0    | .0    | .0  | .3  |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | .1   | *     | .0    | .0    | .0  | .1  |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .6   | .3    | .0    | .0    | .0  | 1.0 | .1  | .4   | .1    | .0    | .0    | .0  | .6  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .5  | .2  | .6   | *     | .0    | .0    | .0  | .8  |           |
| 1-2     | .1  | .5   | .1    | .0    | .0    | .0  | .7  | .1  | 1.7  | .4    | .0    | .0    | .0  | 2.2 |           |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .1  | 1.0  | .9    | *     | .0    | .0  | 2.0 |           |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .6    | .0    | .0    | .0  | .7  |           |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .1    | *     | .0    | .0  | .2  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .4  | .8   | .3    | .0    | .0    | .0  | 1.5 | .3  | 3.5  | 2.1   | .1    | .0    | .0  | 6.0 | 97.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.7 | 4.4  | .4    | .0    | .0    | .0  | 9.6   |         |
| 1-2     | 1.1 | 15.6 | 9.0   | .0    | .0    | .0  | 25.7  |         |
| 3-4     | .2  | 8.3  | 18.3  | 1.1   | .0    | .0  | 27.9  |         |
| 5-6     | .0  | 2.1  | 15.0  | 2.1   | .1    | .0  | 19.3  |         |
| 7       | .0  | .6   | 7.9   | 2.5   | .0    | .0  | 10.9  |         |
| 8-9     | .0  | .1   | 1.9   | 1.3   | *     | .0  | 3.5   |         |
| 10-11   | .0  | *    | .5    | 1.3   | .1    | .0  | 2.0   |         |
| 12      | .0  | .0   | .3    | .4    | .0    | .0  | .6    |         |
| 13-16   | .0  | .0   | .2    | .2    | *     | .0  | .5    |         |
| 17-19   | .0  | .0   | .0    | *     | *     | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 6.0 | 31.1 | 53.5  | 9.1   | .3    | .0  | 100.0 | 4530    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | .9  | 7.8  | 12.3 | 8.8  | 5.1  | 1.3 | .7    | .2  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1992        | 4 |
| 6-7             | *   | 1.5  | 5.9  | 8.5  | 6.0  | 2.9 | 1.7   | .5  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1464        | 6 |
| 8-9             | .0  | .3   | 1.6  | 3.0  | 2.9  | 1.4 | .9    | .4  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 574         | 6 |
| 10-11           | .0  | .3   | .7   | .8   | .6   | .4  | .4    | .1  | .1    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 179         | 6 |
| 12-13           | .0  | .0   | .4   | .2   | .2   | .1  | .3    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 79          | 7 |
| >13             | .0  | .0   | .0   | .3   | .1   | .0  | *     | .0  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 25          | 6 |
| INDET           | 2.7 | 3.9  | 4.8  | 3.5  | 2.4  | 1.0 | .7    | .1  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1035        | 4 |
| TOTAL           | 197 | 735  | 1373 | 1347 | 928  | 382 | 248   | 74  | 51    | 12    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 5348        | 5 |
| PCT             | 3.7 | 13.7 | 25.7 | 25.2 | 17.4 | 7.1 | 4.6   | 1.4 | 1.0   | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .2                 | .2        | .1   | .0        | .0   | .0              | .0   | .5                      | .3             | .7        | 2.5         | .0                  | 2.6        | .5              | 92.9       |
| NE       | .2                 | .2        | .2   | .0        | .0   | .0              | .0   | .6                      | .3             | .7        | 1.7         | .0                  | 2.6        | .4              | 93.8       |
| E        | 1.8                | .8        | .0   | .0        | .0   | .0              | .0   | 2.7                     | .4             | 1.6       | 1.4         | .0                  | 3.0        | .0              | 90.9       |
| SE       | 8.7                | 3.1       | .0   | .0        | .0   | .0              | .0   | 11.8                    | 2.8            | 3.5       | 1.7         | .0                  | 3.1        | .0              | 77.1       |
| S        | .0                 | 1.0       | 2.8  | .0        | .0   | .0              | .0   | 3.8                     | .0             | 2.1       | 1.0         | .0                  | 2.4        | .0              | 90.6       |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 3.3         | .0                  | .5         | .0              | 96.2       |
| W        | 1.1                | .0        | .6   | .0        | .0   | .0              | .0   | 1.7                     | .0             | .6        | 4.0         | .0                  | 5.4        | .0              | 88.3       |
| NW       | .7                 | .0        | .5   | .0        | .0   | .0              | .0   | .9                      | .8             | 1.7       | 1.6         | .0                  | 4.7        | .8              | 90.0       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .3             | 1.0       | 2.3         | .0                  | 3.3        | .7              | 92.4       |
| TOT PCT  | .4                 | .2        | .2   | .0        | .0   | .0              | .0   | .7                      | .3             | .8        | 2.1         | .0                  | 2.7        | .4              | 92.8       |
| TOT OBS: | 8253               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .2                 | .1        | .1   | .0        | .0   | .0              | .0   | .4                      | .4             | 1.2       | 1.8         | .0                  | 1.9        | .3              | 93.9       |
| 06009      | .5                 | .4        | .1   | .0        | .0   | .0              | .0   | 1.0                     | .4             | 1.9       | 2.4         | .0                  | 2.0        | .3              | 91.9       |
| 12015      | .3                 | .3        | .2   | .0        | .0   | .0              | .0   | .8                      | .2             | .0        | 1.8         | .0                  | 3.6        | .3              | 93.2       |
| 18021      | .4                 | .2        | .2   | .0        | .0   | .0              | .0   | .7                      | .3             | .3        | 2.6         | .0                  | 3.1        | .7              | 92.3       |
| TOT PCT    | .4                 | .2        | .2   | .0        | .0   | .0              | .0   | .7                      | .3             | .8        | 2.1         | .0                  | 2.7        | .4              | 92.8       |
| TOT OBS:   | 8478               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL DBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |  |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21    |       |  |
| N        | 1.5                | 16.6 | 22.6  | 2.4   | *     | .0 |       | 43.1  | 12.2      |          | 47.0     | 50.3       | 42.4  | 36.2  | 38.9  | 52.3  | 47.7  | 40.0  |  |
| NE       | 1.1                | 15.6 | 23.1  | 3.0   | *     | .0 |       | 42.8  | 12.7      |          | 39.1     | 36.2       | 42.9  | 51.6  | 46.8  | 34.9  | 38.3  | 45.1  |  |
| E        | .3                 | 1.8  | 1.8   | .3    | *     | .0 |       | 4.1   | 11.8      |          | 3.3      | 1.0        | 3.7   | 5.3   | 5.2   | 6.0   | 3.6   | 4.8   |  |
| SE       | .1                 | .5   | .2    | *     | *     | .0 |       | .9    | 9.2       |          | .7       | .5         | .7    | .7    | 1.5   | 1.0   | .7    | .7    |  |
| S        | .2                 | .3   | .2    | *     | *     | .0 |       | .8    | 8.9       |          | .9       | 1.1        | .8    | .5    | 1.0   | .9    | .6    | .5    |  |
| SW       | .2                 | .4   | .1    | *     | .0    | .0 |       | .7    | 6.9       |          | .7       | .1         | .7    | 1.0   | .6    | .6    | .7    | .5    |  |
| W        | .3                 | .8   | .1    | .0    | .0    | .0 |       | 1.1   | 6.1       |          | 1.1      | 1.0        | 1.2   | 1.1   | .8    | .5    | 1.3   | 1.6   |  |
| NW       | .5                 | 2.5  | .8    | *     | .0    | .0 |       | 3.9   | 7.9       |          | 4.4      | 4.9        | 4.3   | 2.8   | 2.7   | 3.3   | 4.2   | 5.1   |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 2.6                |      |       |       |       |    |       | 2.6   | .0        |          | 2.8      | 4.9        | 3.1   | .9    | 2.7   | .5    | 3.1   | 1.7   |  |
| TOT DBS  | 1044               | 5932 | 7564  | 896   | 15    | 0  | 15451 |       | 11.7      |          | 3045     | 183        | 3011  | 1381  | 3184  | 197   | 3048  | 1402  |  |
| TOT PCT  | 6.8                | 38.4 | 49.0  | 5.8   | .1    | .0 |       | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WNO DIR | WIND SPEED (KNOTS) |      |       |       |       | 41+   | TOTAL DBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |  |  |
|---------|--------------------|------|-------|-------|-------|-------|-----------|----------|----------|------------|-------|-------|--|--|
|         | 0-6                | 7-16 | 17-27 | 28-40 | 00 03 |       |           |          |          | 06 09      | 12 15 | 18 21 |  |  |
| N       | 7.2                | 25.9 | 9.7   | .3    | .0    |       | 43.1      | 12.2     | 37.2     | 40.5       | 39.7  | 45.2  |  |  |
| NE      | 5.8                | 25.7 | 10.9  | .4    | .0    |       | 42.8      | 12.7     | 48.9     | 45.7       | 46.1  | 40.5  |  |  |
| E       | .9                 | 2.2  | 1.0   | .1    | .0    |       | 4.1       | 11.8     | 3.1      | 4.2        | 5.2   | 4.0   |  |  |
| SE      | .4                 | .3   | .1    | *     | .0    |       | .9        | 9.2      | .7       | .7         | 1.4   | .7    |  |  |
| S       | .4                 | .3   | .1    | *     | .0    |       | .8        | 8.9      | .9       | .7         | .9    | .6    |  |  |
| SW      | .4                 | .2   | *     | *     | .0    |       | .7        | 6.9      | .7       | .8         | .6    | .6    |  |  |
| W       | .7                 | .4   | *     | .0    | .0    |       | 1.1       | 6.1      | 1.1      | 1.2        | .8    | 1.4   |  |  |
| NW      | 1.8                | 1.9  | .2    | *     | .0    |       | 3.9       | 7.9      | 4.4      | 3.8        | 2.7   | 4.4   |  |  |
| VAR     | .0                 | .0   | .0    | .0    | .0    |       | .0        | .0       | .0       | .0         | .0    | .0    |  |  |
| CALM    | 2.6                |      |       |       |       |       | 2.6       | .0       | 2.9      | 2.4        | 2.6   | 2.6   |  |  |
| TOT DBS | 3123               | 8794 | 3402  | 132   | 0     | 15451 |           | 11.7     | 3228     | 4392       | 3381  | 4450  |  |  |
| TOT PCT | 20.2               | 56.9 | 22.0  | .9    | .0    |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |  |  |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003 | 2.9  | 3.9 | 38.6 | 48.9  | 5.7   | .1    | .0  | 11.8 | 100.0    | 3228      |
| 06009 | 2.4  | 4.0 | 38.3 | 48.9  | 6.4   | .1    | .0  | 11.8 | 100.0    | 4392      |
| 12015 | 2.6  | 4.2 | 36.8 | 50.2  | 6.1   | .2    | .0  | 11.9 | 100.0    | 3381      |
| 18021 | 2.6  | 4.5 | 39.6 | 48.1  | 5.1   | .1    | .0  | 11.5 | 100.0    | 4450      |
| TOT   | 405  | 639 | 5932 | 7564  | 896   | 15    | 0   | 11.7 |          | 15451     |
| PCT   | 2.6  | 4.1 | 38.4 | 49.0  | 5.8   | .1    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBS | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|---------|-----------|------------------|
| N        | 32.1 | 6.1  | 8.4  | 3.1     |           | 2.2              |
| NE       | 21.3 | 5.2  | 7.1  | 2.8     |           | 2.5              |
| E        | 1.3  | .5   | .8   | .4      |           | 3.6              |
| SE       | .3   | .1   | .3   | .3      |           | 4.8              |
| S        | .4   | .2   | .1   | .1      |           | 3.1              |
| SW       | .3   | .1   | .1   | .1      |           | 2.8              |
| W        | .6   | .1   | .1   | .1      |           | 2.7              |
| NW       | 2.1  | .5   | .8   | .4      |           | 2.7              |
| VAR      | .0   | .0   | .0   | .0      |           | .0               |
| CALM     | 3.0  | .2   | .5   | .2      |           | 1.5              |
| TOT OBS  | 4024 | 845  | 1197 | 490     | 6556      | 2.4              |
| TOT PCT  | 61.4 | 12.9 | 18.3 | 7.5     | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| WIND DIR | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|----------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
| N        | .1  | *   | .1  | .4  | 1.3  | 1.8  | 1.0  | .5   | .6   | 1.1   | 42.6            |           |
| NE       | *   | *   | *   | .4  | 1.5  | 1.5  | .7   | .3   | .5   | .8    | 30.5            |           |
| E        | .0  | .0  | *   | .1  | .1   | .2   | .1   | .1   | .1   | *     | 2.2             |           |
| SE       | .0  | .0  | *   | .1  | .1   | *    | .1   | *    | .0   | .0    | .5              |           |
| S        | *   | .0  | *   | *   | *    | *    | *    | *    | *    | *     | .7              |           |
| SW       | *   | .0  | *   | *   | *    | *    | *    | *    | *    | *     | .5              |           |
| W        | .0  | .0  | *   | *   | *    | *    | .0   | .0   | .0   | *     | .8              |           |
| NW       | .0  | .0  | *   | .1  | .2   | .2   | .1   | *    | .1   | .1    | 3.0             |           |
| VAR      | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM     | *   | .0  | .0  | *   | .1   | *    | *    | .0   | .1   | .1    | 3.5             |           |
| TOT OBS  | 11  | 3   | 16  | 78  | 230  | 252  | 130  | 63   | 96   | 141   | 5536            | 6556      |
| TOT PCT  | .2  | *   | .2  | 1.2 | 3.5  | 3.8  | 2.0  | 1.0  | 1.5  | 2.2   | 84.4            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | 2.6       | 3.6  | 3.7  | 3.7  | 3.7  | 3.7  | 3.7   | 3.7  |
| >5000          | 3.4       | 4.5  | 4.7  | 4.7  | 4.7  | 4.7  | 4.7   | 4.7  |
| >3500          | 4.8       | 6.3  | 6.6  | 6.6  | 6.6  | 6.6  | 6.6   | 6.6  |
| >2000          | 7.2       | 9.9  | 10.4 | 10.4 | 10.4 | 10.4 | 10.4  | 10.4 |
| >1000          | 9.7       | 13.2 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9  | 13.9 |
| >600           | 10.6      | 14.4 | 15.1 | 15.1 | 15.1 | 15.1 | 15.2  | 15.2 |
| >300           | 10.7      | 14.5 | 15.3 | 15.4 | 15.4 | 15.4 | 15.4  | 15.4 |
| >150           | 10.7      | 14.5 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4  | 15.4 |
| >0             | 10.7      | 14.6 | 15.5 | 15.5 | 15.6 | 15.6 | 15.6  | 15.6 |
| TOTAL          | 716       | 981  | 1039 | 1043 | 1044 | 1045 | 1046  | 1047 |

TOTAL NUMBER OF OBS: 6710

PCT FREQ NH <5/8: 84.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 8 OBS | TOTAL OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 54.2 | 11.0 | 8.1 | 5.8 | 4.4 | 2.9 | 4.1 | 3.9 | 5.5 | .1    | 6991      |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N     | NE    | E     | SE    | S     | SW    | W     | NW    | VAR | CALM  | PCT   | TOTAL<br>OBS |
|--------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|--------------|
| <1/2         | PCP    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .0    |              |
|              | NO PCP | * * * | .0    | * * * | .0    | .0    | .0    | .0    | .0    | .0  | * * * | .1    |              |
|              | TOT %  | * * * | .0    | * * * | .0    | .0    | .0    | .0    | .0    | .0  | * * * | .1    |              |
| 1/2<1        | PCP    | .0    | .0    | * * * | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .0    |              |
|              | NO PCP | .3    | .1    | * * * | .0    | .0    | * * * | * * * | * * * | .0  | .0    | .5    |              |
|              | TOT %  | .3    | .1    | * * * | .0    | .0    | * * * | * * * | * * * | .0  | .0    | .5    |              |
| 1<2          | PCP    | .0    | .0    | .0    | * * * | .0    | .0    | .0    | .0    | .0  | .0    | * * * |              |
|              | NO PCP | .2    | .1    | * * * | * * * | .0    | .0    | * * * | .1    | .0  | * * * | .5    |              |
|              | TOT %  | .2    | .1    | * * * | * * * | .0    | .0    | * * * | .1    | .0  | * * * | .5    |              |
| 2<5          | PCP    | * * * | * * * | * * * | * * * | .0    | .0    | .0    | .0    | .0  | .0    | .1    |              |
|              | NO PCP | 1.1   | .6    | .1    | * * * | .1    | * * * | .0    | .1    | .0  | .1    | 2.1   |              |
|              | TOT %  | 1.1   | .6    | .1    | * * * | .1    | * * * | .0    | .1    | .0  | .1    | 2.2   |              |
| 5<10         | PCP    | .1    | .1    | * * * | .1    | * * * | .0    | * * * | * * * | .0  | .0    | .3    |              |
|              | NO PCP | 12.0  | 8.0   | .6    | .2    | .2    | .1    | .3    | 1.0   | .0  | .7    | 23.0  |              |
|              | TOT %  | 12.1  | 8.1   | .6    | .2    | .2    | .1    | .3    | 1.1   | .0  | .7    | 23.4  |              |
| 10+          | PCP    | .1    | .1    | * * * | * * * | .0    | * * * | * * * | * * * | .0  | .0    | .3    |              |
|              | NO PCP | 36.3  | 26.7  | 2.1   | .5    | .6    | .4    | 2.8   | 2.8   | .0  | 2.8   | 73.0  |              |
|              | TOT %  | 36.4  | 26.8  | 2.2   | .6    | .6    | .4    | .7    | 2.8   | .0  | 2.8   | 73.3  |              |
| TOT OBS      |        | 50.2  | 35.9  | 2.9   | .9    | .9    | .6    | 1.1   | 4.0   | .0  | 3.7   | 100.0 | 8246         |
| TOT PCT      |        |       |       |       |       |       |       |       |       |     |       |       |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N     | NE    | E     | SE    | S     | SW    | W     | NW    | VAR | CALM  | PCT   | TOTAL<br>OBS |
|--------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|--------------|
| <1/2         | 0-3        | .0    | * * * | .0    | .0    | .0    | .0    | .0    | * * * | .0  | * * * | .1    |              |
|              | 4-10       | * * * | * * * | .0    | .0    | .0    | .0    | * * * | * * * | .0  | * * * | .1    |              |
|              | 11-21      | * * * | * * * | * * * | .0    | .0    | .0    | .0    | * * * | .0  | * * * | .1    |              |
|              | 22+        | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .0    |              |
|              | TOT %      | .1    | * * * | * * * | .0    | .0    | .0    | * * * | * * * | .0  | * * * | .1    |              |
| 1/2<1        | 0-3        | * * * | * * * | .0    | .0    | .0    | .0    | * * * | .0    | .0  | * * * | .1    |              |
|              | 4-10       | .1    | * * * | * * * | .0    | .0    | * * * | * * * | * * * | .0  | * * * | .2    |              |
|              | 11-21      | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | .4    |              |
|              | 22+        | * * * | .0    | * * * | * * * | .0    | .0    | .0    | .0    | .0  | * * * | .2    |              |
|              | TOT %      | .2    | .1    | * * * | * * * | .0    | .0    | * * * | * * * | .0  | * * * | .4    |              |
| 1<2          | 0-3        | .1    | * * * | * * * | .0    | .0    | .0    | * * * | * * * | .0  | * * * | .2    |              |
|              | 4-10       | .1    | .1    | * * * | * * * | .0    | .0    | * * * | * * * | .0  | * * * | .3    |              |
|              | 11-21      | .1    | .1    | * * * | .0    | .0    | .0    | .0    | * * * | .0  | * * * | .2    |              |
|              | 22+        | * * * | * * * | .0    | * * * | .0    | .0    | .0    | .0    | .0  | * * * | .7    |              |
|              | TOT %      | .3    | .2    | * * * | * * * | .0    | .0    | .0    | .1    | .0  | * * * | .7    |              |
| 2<5          | 0-3        | .1    | * * * | * * * | .0    | .0    | .0    | .0    | * * * | .0  | .1    | .2    |              |
|              | 4-10       | .4    | .3    | .1    | .0    | .0    | .0    | .0    | .1    | .0  | .0    | .9    |              |
|              | 11-21      | .6    | .5    | * * * | * * * | .1    | * * * | .0    | .0    | .0  | .0    | 1.2   |              |
|              | 22+        | .1    | .1    | * * * | * * * | * * * | .0    | .0    | * * * | .0  | .0    | .2    |              |
|              | TOT %      | 1.1   | 1.0   | .1    | * * * | .1    | * * * | .0    | .1    | .0  | .1    | 2.5   |              |
| 5<10         | 0-3        | .3    | .2    | * * * | * * * | * * * | .1    | .1    | .0    | .0  | .5    | 1.3   |              |
|              | 4-10       | 3.9   | 2.8   | .3    | .1    | .1    | * * * | .2    | .6    | .0  | .0    | 8.0   |              |
|              | 11-21      | 5.9   | 4.5   | .3    | * * * | .1    | * * * | * * * | .3    | .0  | .0    | 11.1  |              |
|              | 22+        | .7    | .8    | * * * | * * * | .0    | .0    | .0    | * * * | .0  | .0    | 1.6   |              |
|              | TOT %      | 10.9  | 8.3   | .7    | .2    | .1    | .1    | .3    | 1.0   | .0  | .5    | 22.1  |              |
| 10+          | 0-3        | 1.1   | .7    | .2    | * * * | .1    | .1    | .1    | .4    | .0  | 2.3   | 5.0   |              |
|              | 4-10       | 13.4  | 10.8  | 1.1   | .3    | .2    | .4    | 1.7   | .0    | .0  | .0    | 28.3  |              |
|              | 11-21      | 18.6  | 16.7  | .9    | .1    | .1    | .1    | .1    | .6    | .0  | .0    | 37.2  |              |
|              | 22+        | 1.8   | 1.8   | .1    | * * * | * * * | * * * | .0    | * * * | .0  | .0    | 3.7   |              |
|              | TOT %      | 34.9  | 30.1  | 2.2   | .5    | .5    | .4    | .5    | 2.7   | .0  | 2.3   | 74.1  |              |
| TOT OBS      |            | 47.5  | 39.7  | 3.0   | .8    | .7    | .5    | .9    | 3.9   | .0  | 3.0   | 100.0 | 11205        |
| TOT PCT      |            |       |       |       |       |       |       |       |       |     |       |       |              |

## OCTOBER

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .1         | .0         | .1         | 1.0        | 3.1          | 3.0          | 1.4          | .8           | 1.3          | 2.3   | 13.2  | 86.8                | 1632         |
| 06009         | .2         | .1         | .3         | 1.4        | 3.8          | 3.9          | 1.8          | .5           | .9           | 2.3   | 15.2  | 84.8                | 1596         |
| 12015         | .1         | .1         | .4         | 1.3        | 3.3          | 3.6          | 2.6          | 1.0          | 1.6          | 2.2   | 16.3  | 83.7                | 1914         |
| 18021         | .2         | .0         | .1         | 1.0        | 3.5          | 4.6          | 1.8          | 1.3          | 1.9          | 1.8   | 16.2  | 83.8                | 1748         |
| TOT           | 11         | 3          | 16         | 81         | 238          | 260          | 131          | 63           | 101          | 150   | 1054  | 5836                | 6890         |
| PCT           | .2         | *          | .2         | 1.2        | 3.5          | 3.8          | 1.9          | .9           | 1.5          | 2.2   | 15.3  | 84.7                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | .5    | .4  | 2.4 | 21.5 | 75.1 | 2564         |
| 06009         | .2   | .4    | .6  | 2.0 | 23.7 | 73.1 | 3029         |
| 12015         | .2   | .3    | .7  | 2.9 | 20.5 | 75.4 | 2727         |
| 18021         | .1   | .5    | 1.0 | 2.6 | 22.8 | 73.1 | 3120         |
| TOT           | 17   | 49    | 77  | 282 | 2539 | 8476 | 11440        |
| PCT           | .1   | .4    | .7  | 2.5 | 22.2 | 74.1 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .1            | .4         | 3.6         | 11.7            | 84.7               | 1585         |
| 06009         | .3            | .6         | 4.0         | 12.9            | 83.1               | 1539         |
| 12015         | .1            | .6         | 4.4         | 13.9            | 81.6               | 1873         |
| 18021         | .3            | .5         | 4.4         | 14.1            | 81.5               | 1713         |
| TOT           | 13            | 36         | 276         | 887             | 5547               | 6710         |
| PCT           | .2            | .5         | 4.1         | 13.2            | 82.7               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | *     | .0    | .0    | .0     | 1            | *           |
| 85/89  | .0   | *     | .1    | .2    | .5    | .4    | .1    | .0     | 71           | 1.2         |
| 80/84  | .0   | .0    | .1    | .8    | 3.1   | 5.5   | 3.6   | .5     | 807          | 13.6        |
| 75/79  | .0   | .0    | .0    | .5    | 3.3   | 13.5  | 10.5  | 2.5    | 1794         | 30.3        |
| 70/74  | .0   | .0    | *     | .2    | 1.7   | 11.9  | 20.5  | 9.3    | 2580         | 43.6        |
| 65/69  | .0   | .0    | .0    | *     | .1    | .9    | 5.5   | 4.6    | 658          | 11.1        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .1     | 4            | .1          |
| TOTAL  | 0    | 1     | 10    | 100   | 516   | 1900  | 2374  | 1010   | 5915         | 100.0       |
| PCT    | .0   | *     | .2    | 1.7   | 8.7   | 32.1  | 40.2  | 17.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM |
|------|------|-----|----|----|----|-----|-----|-----|------|
| *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| .4   | .4   | .2  | *  | .0 | *  | .1  | .1  | .0  | *    |
| 6.3  | 4.2  | .7  | .4 | .2 | .2 | .4  | .8  | .0  | .4   |
| 15.2 | 11.3 | .9  | .3 | .3 | .1 | .2  | 1.3 | .0  | .7   |
| 21.7 | 17.1 | 1.1 | .2 | .3 | .2 | .4  | 1.5 | .0  | 1.0  |
| 5.6  | 4.5  | .2  | *  | *  | *  | *   | .4  | .0  | .2   |
| *    | *    | .0  | .0 | .0 | *  | .0  | .0  | .0  | *    |
| 49.4 | 37.6 | 3.0 | .9 | .9 | .5 | 1.1 | 4.1 | .0  | 2.5  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 82  | 80  | 73  | 67 | 64 | 54  | 73.0 | 3262         |
| 06009         | 88  | 82  | 80  | 73  | 67 | 64 | 54  | 72.9 | 4410         |
| 12015         | 91  | 86  | 83  | 76  | 69 | 66 | 55  | 75.9 | 3349         |
| 18021         | 94  | 85  | 82  | 75  | 69 | 66 | 55  | 75.3 | 4413         |
| TOT           | 94  | 84  | 82  | 74  | 68 | 64 | 54  | 74.2 | 15434        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .5    | 6.1   | 26.4  | 42.7  | 24.3   | 83   | 1486         |
| 06009         | .0   | 1.3   | 5.2   | 22.3  | 44.3  | 26.9   | 83   | 1486         |
| 12015         | .0   | 3.8   | 13.1  | 41.2  | 34.3  | 7.6    | 77   | 1533         |
| 18021         | .0   | 1.7   | 10.1  | 36.9  | 40.4  | 11.0   | 79   | 1560         |
| TOT           | 0    | 113   | 525   | 1930  | 2450  | 1047   | 81   | 6065         |

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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1894-1973

TABLE 17

AREA 0006 CAPE BLANC  
20.4N 18.1WPCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 23/25              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 1     | .0       | *         |
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 5     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | .2       | .1       | .0       | *   | 24    | *        | .3        |
| 11/13              | .0       | .0       | .0       | *        | .0       | .1       | .3       | .2       | .1       | *        | .0  | 51    | *        | .6        |
| 9/10               | .0       | .0       | .0       | .0       | *        | .3       | .7       | .2       | .1       | .0       | .0  | 104   | .1       | 1.3       |
| 7/8                | .0       | .0       | .0       | *        | .3       | .7       | .8       | .4       | .1       | .0       | .0  | 174   | .1       | 2.2       |
| 6                  | .0       | .0       | .0       | *        | .1       | 1.0      | .4       | .2       | *        | .0       | .0  | 132   | .1       | 1.7       |
| 5                  | .0       | .0       | .0       | *        | .8       | 1.7      | .6       | .4       | .1       | *        | .0  | 282   | .1       | 3.6       |
| 4                  | .0       | .0       | .0       | .1       | 1.7      | 1.7      | 1.0      | .6       | .2       | .0       | .0  | 402   | .2       | 5.1       |
| 3                  | .0       | .0       | .0       | .3       | 2.8      | 1.8      | 1.0      | .7       | .1       | .0       | .0  | 520   | .1       | 6.7       |
| 2                  | .0       | *        | .0       | .6       | 4.5      | 2.5      | 1.5      | 1.2      | .1       | .0       | .0  | 799   | .3       | 10.2      |
| 1                  | .0       | .0       | *        | 1.0      | 5.3      | 2.6      | 2.1      | 1.7      | *        | .0       | .0  | 981   | .2       | 12.7      |
| 0                  | .0       | .0       | *        | 2.1      | 5.1      | 3.4      | 3.0      | 1.1      | .0       | .0       | .0  | 1124  | .3       | 14.4      |
| -1                 | .0       | .0       | .0       | .9       | 3.2      | 3.2      | 2.9      | .6       | *        | .0       | .0  | 824   | .2       | 10.6      |
| -2                 | .0       | .0       | .0       | 1.0      | 2.5      | 3.3      | 2.5      | .3       | .0       | .0       | .0  | 733   | .2       | 9.4       |
| -3                 | .0       | .0       | .0       | .4       | 1.6      | 2.6      | 1.3      | .1       | .0       | .0       | .0  | 468   | .1       | 6.0       |
| -4                 | .0       | .0       | .2       | .4       | 1.2      | 2.2      | .6       | .1       | .0       | .0       | .0  | 357   | .1       | 4.6       |
| -5                 | .0       | .0       | .1       | .4       | 1.1      | 1.5      | .4       | .1       | .0       | .0       | .0  | 276   | .1       | 3.6       |
| -6                 | .0       | .0       | *        | .1       | .6       | .5       | .1       | .0       | .0       | .0       | .0  | 103   | *        | 1.3       |
| -7/-8              | .0       | .0       | .1       | .1       | .7       | .5       | .1       | .0       | .0       | .0       | .0  | 116   | .0       | 1.5       |
| -9/-10             | .0       | .0       | *        | .2       | .2       | .1       | *        | .0       | .0       | .0       | .0  | 43    | *        | .5        |
| -11/-13            | *        | .1       | .1       | .1       | .1       | *        | .0       | .0       | .0       | .0       | .0  | 38    | .1       | .4        |
| -14/-16            | .1       | .2       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 37    | .1       | .4        |
| -17/-19            | *        | .1       | .1       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 18    | *        | .2        |
| -20/-22            | .1       | .1       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 12    | .1       | .1        |
| -23/-25            | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 3     | .0       | *         |
| TOTAL              | 18       | 37       | 58       | 616      | 2261     | 1481     | 617      | 86       | 5        |          |     | 7628  | 178      | 7450      |
| PCT                | .2       | .5       | .8       | 8.1      | 32.1     | 29.6     | 19.4     | 8.1      | 1.1      | .1       | *   | 100.0 | 2.3      | 97.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 2.7  | .2    | .0    | .0    | .0  | 3.6  | .3  | 1.8  | .1    | .0    | .0    | .0  | 2.2  |
| 1-2     | .6  | 9.6  | 5.1   | .0    | .0    | .0  | 15.3 | .4  | 7.2  | 3.4   | .0    | .0    | .0  | 11.1 |
| 3-4     | *   | 5.8  | 10.4  | .3    | .0    | .0  | 16.5 | .1  | 3.8  | 7.4   | .3    | .0    | .0  | 11.7 |
| 5-6     | .0  | .9   | 8.3   | .8    | *     | .0  | 10.0 | .0  | .9   | 5.0   | .6    | *     | .0  | 6.4  |
| 7       | .0  | .1   | 2.4   | .7    | .0    | .0  | 3.2  | .0  | .2   | 1.7   | .6    | .0    | .0  | 2.5  |
| 8-9     | .0  | *    | .9    | *     | .0    | .0  | 1.5  | .0  | *    | .5    | .3    | .0    | .0  | .9   |
| 10-11   | .0  | .0   | .2    | .4    | *     | .0  | .6   | .0  | .0   | .1    | .1    | .0    | .0  | .1   |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | *    |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.3 | 19.2 | 27.4  | 2.8   | .1    | .0  | 50.8 | .8  | 13.9 | 18.5  | 2.2   | *     | .0  | 35.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .3  | *   | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .1  | .7   | .3    | .0    | .0    | .0  | 1.1 | .0  | .2   | *     | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .5   | .4    | .0    | .0    | .0  | .9  | .0  | .1   | .1    | *     | .0    | .0  | .3  |
| 5-6     | .0  | .1   | .3    | *     | .0    | .0  | .3  | .0  | .0   | .1    | *     | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | *     | *     | *   | *   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | *     | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | *   |
| 10-11   | .0  | *    | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | *     | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 1.4  | .9    | .1    | .1    | .0  | 2.7 | *   | .3   | .2    | .1    | *     | .0  | .6  |



PERIOD: (OVER-ALL) 1963-1973

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AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .1  | *   | .1   | .0    | .0    | .0    | .0  | .1  |     |
| 1-2     | *   | .1   | .1    | .0    | .0    | .0  | .3  | *   | .1   | *     | .0    | .0    | .0  | .1  |     |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .1  |     |
| 5-6     | *   | .0   | .1    | *     | .0    | .0  | .1  | .0  | .0   | *     | *     | .0    | .0  | .0  |     |
| 7       | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | .0  |     |
| 8-9     | .0  | .0   | .1    | .0    | *     | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |     |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |
| TOT PCT | .1  | .3   | .3    | .1    | *     | .0  | .8  | .1  | .2   | .1    | *     | .0    | .0  | .4  |     |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .3  | .5   | .0    | .0    | .0    | .0  | .8  |      |           |
| 1-2     | .1  | .3   | *     | .0    | .0    | .0  | .4  | .1  | 1.4  | .2    | .0    | .0    | .0  | 1.7 |      |           |
| 3-4     | .0  | .1   | *     | .0    | .0    | .0  | .2  | .0  | .5   | .4    | .0    | .0    | .0  | .9  |      |           |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | *   | .0  | *    | .2    | .0    | .0    | .0  | .3  |      |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | *     | .0    | .0  | .1  |      |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |      |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |      |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .2  | .6   | .1    | .0    | .0    | .0  | .9  | .5  | 2.3  | 1.0   | *     | .0    | .0  | 3.8 | 95.4 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.7 | 5.4  | .4    | .0    | .0    | .0  | 12.5  |         |
| 1-2     | 1.5 | 19.5 | 9.1   | .0    | .0    | .0  | 30.1  |         |
| 3-4     | .1  | 10.9 | 18.7  | .7    | .0    | .0  | 30.4  |         |
| 5-6     | *   | 1.9  | 13.8  | 1.4   | *     | .0  | 17.2  |         |
| 7       | .0  | .3   | 4.2   | 1.4   | *     | .0  | 5.9   |         |
| 8-9     | .0  | .1   | 1.5   | .8    | .1    | .0  | 2.5   |         |
| 10-11   | .0  | *    | .3    | .7    | *     | .0  | 1.1   |         |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | *     | .0    | .0    | .0  | *     |         |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.4 | 39.2 | 48.1  | 5.2   | .2    | .0  | 100.0 | 4921    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.7 | 11.0 | 14.1 | 7.7  | 3.1  | .8  | .3    | *  | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2242  | 3        |
| 6-7          | *   | 1.7  | 5.0  | 7.7  | 4.5  | 1.9 | .8    | .3 | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1281  | 5        |
| 8-9          | .0  | .5   | 2.0  | 3.3  | 2.4  | 1.6 | .7    | .2 | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 616   | 6        |
| 10-11        | .0  | .4   | .8   | .9   | .7   | .4  | .2    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 208   | 5        |
| 12-13        | .0  | .0   | 1.3  | .5   | .3   | .1  | .1    | .0 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 133   | 4        |
| >13          | .0  | .0   | .0   | .3   | .3   | .1  | *     | .0 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 39    | 7        |
| INDET        | 5.7 | 4.3  | 5.8  | 3.9  | 1.0  | .5  | .4    | .1 | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1261  | 3        |
| TOTAL        | 425 | 1036 | 1680 | 1404 | 705  | 309 | 146   | 41 | 25    | 6     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 5780  | 4        |
| PCT          | 7.4 | 17.9 | 29.1 | 24.3 | 12.2 | 5.3 | 2.5   | .7 | .4    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

NOVEMBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | .2   | .2        | .1   | .0        | .0   | .0              | .0   | .5              | .2             | .3                      | 2.1         | .1                  | 1.7        | .3              | 94.8       |  |
| NE                 | .2   | .2        | .2   | .0        | .0   | .0              | *    | .5              | .1             | .7                      | 2.0         | *                   | 2.1        | .8              | 93.7       |  |
| E                  | .0   | .3        | .2   | .0        | .0   | .0              | .0   | .5              | 1.2            | .1                      | 3.0         | .0                  | 4.7        | 1.5             | 88.9       |  |
| SE                 | 4.8  | 1.6       | .0   | .0        | .0   | .0              | .0   | 6.4             | 1.2            | .0                      | 2.4         | .0                  | .4         | 1.6             | 88.0       |  |
| S                  | 1.3  | 1.1       | .5   | .0        | .0   | .0              | .0   | 3.0             | 3.8            | 1.1                     | 1.8         | .0                  | 1.3        | .0              | 89.0       |  |
| SW                 | 1.3  | .0        | 1.4  | .0        | .0   | .0              | .0   | 2.7             | .8             | 1.4                     | 3.3         | .0                  | .6         | .6              | 90.5       |  |
| W                  | .0   | 3.5       | .8   | .0        | .0   | .0              | .0   | 4.3             | .8             | 3.1                     | 4.7         | .6                  | 1.2        | .0              | 85.3       |  |
| NW                 | .3   | .2        | .2   | .0        | .0   | .0              | .0   | .7              | .8             | .2                      | 4.0         | .1                  | 1.9        | .7              | 91.6       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .4   | .4        | .0   | .0        | .0   | .0              | .0   | .8              | .4             | .8                      | 3.3         | .4                  | 1.2        | .0              | 93.2       |  |
| TOT PCT            | .3   | .3        | .2   | .0        | .0   | .0              | *    | .7              | .4             | .6                      | 2.3         | .1                  | 1.9        | .5              | 93.5       |  |
| TOT OBS:           | 8268 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| PRECIPITATION TYPE |      |              |      |              |      |                       |      |                    |                   | OTHER WEATHER PHENOMENA |                   |                           |               |                    |                  |  |
|--------------------|------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------|-------------------------|-------------------|---------------------------|---------------|--------------------|------------------|--|
| HOUR<br>(GMT)      | RAIN | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR | THDR<br>LTNG            | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG<br>WEA |  |
| 00603              | .4   | .3           | .1   | .0           | .0   | .0                    | .0   | .8                 | .4                | 1.3                     | 1.3               | .1                        | 1.6           | .4                 | 94.2             |  |
| 06009              | .2   | .4           | .2   | .0           | .0   | .0                    | .0   | .8                 | .5                | 1.1                     | 2.2               | .1                        | 1.3           | .3                 | 93.7             |  |
| 12015              | .2   | .2           | .1   | .0           | .0   | .0                    | .0   | .5                 | .4                | .0                      | 3.1               | .1                        | 1.7           | .7                 | 93.5             |  |
| 18021              | .3   | .2           | .2   | .0           | .0   | .0                    | *    | .7                 | .2                | .1                      | 2.9               | .1                        | 3.2           | .7                 | 92.1             |  |
| TOT PCT            | .2   | .3           | .2   | .0           | .0   | .0                    | *    | .7                 | .3                | .6                      | 2.4               | .1                        | 2.0           | .5                 | 93.4             |  |
| TOT OBS:           | 8539 |              |      |              |      |                       |      |                    |                   |                         |                   |                           |               |                    |                  |  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00    |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |       |
| N        | 2.0                | 14.5 | 14.6  | 1.2   | *     | .0  |       | 32.3         | 11.1        |             | 38.4       | 41.9  | 31.7  | 21.9  | 27.7  | 38.6  | 37.4  | 28.7  |
| NE       | 1.4                | 16.0 | 25.0  | 3.6   | .1    | .0  |       | 46.1         | 12.9        |             | 41.5       | 38.8  | 47.0  | 55.8  | 49.5  | 41.9  | 40.8  | 49.6  |
| E        | .5                 | 3.0  | 3.1   | .7    | *     | .0  |       | 7.3          | 12.0        |             | 5.2        | 2.0   | 6.5   | 10.4  | 9.1   | 5.3   | 6.6   | 8.4   |
| SE       | .2                 | .6   | .2    | *     | .0    | .0  |       | 1.1          | 8.2         |             | .8         | .0    | 1.0   | 1.5   | 1.3   | 1.1   | 1.0   | 1.2   |
| S        | .4                 | .8   | .3    | *     | .0    | .0  |       | 1.5          | 7.5         |             | 1.3        | .6    | 1.3   | 1.3   | 2.1   | 3.5   | 1.5   | 1.2   |
| SW       | .4                 | 1.2  | .3    | .1    | *     | .0  |       | 2.0          | 7.7         |             | 2.0        | 2.5   | 1.9   | 2.6   | 1.8   | 2.3   | 2.0   | 2.5   |
| W        | .5                 | 1.0  | .2    | .1    | *     | .0  |       | 1.8          | 6.8         |             | 2.1        | .6    | 1.7   | 1.7   | 1.7   | 1.2   | 1.7   | 2.3   |
| NW       | .7                 | 2.3  | .5    | *     | .0    | .0  |       | 3.4          | 6.8         |             | 3.6        | 4.8   | 3.7   | 2.9   | 2.7   | 2.4   | 4.1   | 3.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0           | .0          |             | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.4                |      |       |       |       |     |       | 4.4          | .0          |             | 5.2        | 8.7   | 5.2   | 1.9   | 4.1   | 3.7   | 5.1   | 2.7   |
| TOT OBS  | 1661               | 6266 | 7014  | 901   | 15    | 0   | 15857 |              | 11.1        |             | 3066       | 161   | 3164  | 1408  | 3310  | 164   | 3154  | 1430  |
| TOT PCT  | 10.5               | 39.5 | 44.2  | 5.7   | .1    | .0  |       | 100.0        |             |             | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |          |
|----------|--------------------|------|-------|-------|-----|--------------|-------------|-------------|------------|----------|----------|----------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |              |             |             | 00<br>03   | 06<br>09 | 12<br>15 | 18<br>21 |
| N        | 7.5                | 18.8 | 5.8   | .1    | .0  |              | 32.3        | 11.1        | 38.6       | 28.6     | 28.2     | 34.7     |
| NE       | 6.3                | 26.2 | 19.2  | .5    | .0  |              | 46.1        | 12.9        | 41.4       | 49.7     | 49.1     | 43.6     |
| E        | 1.6                | 3.8  | 1.7   | .1    | .0  |              | 7.3         | 12.0        | 5.0        | 7.7      | 8.9      | 7.1      |
| SE       | .6                 | .4   | .1    | *     | .0  |              | 1.1         | 8.2         | .8         | 1.2      | 1.3      | 1.1      |
| S        | .8                 | .6   | .1    | *     | .0  |              | 1.5         | 7.5         | 1.3        | 1.3      | 2.2      | 1.4      |
| SW       | 1.1                | .8   | .1    | *     | .0  |              | 2.0         | 7.7         | 2.1        | 2.1      | 1.8      | 2.1      |
| W        | 1.1                | .5   | .1    | *     | .0  |              | 1.8         | 6.8         | 2.0        | 1.7      | 1.7      | 1.9      |
| NW       | 2.0                | 1.3  | .1    | *     | .0  |              | 3.4         | 6.8         | 3.6        | 3.4      | 2.6      | 3.9      |
| VAR      | .0                 | .0   | .0    | .0    | .0  |              | .0          | .0          | .0         | .0       | .0       | .0       |
| CALM     | 4.4                |      |       |       |     |              | 4.4         | .0          | 5.3        | 4.2      | 4.1      | 4.3      |
| TOT OBS  | 4045               | 8305 | 3379  | 128   | 0   | 15857        |             | 11.1        | 3227       | 4572     | 3474     | 4584     |
| TOT PCT  | 25.5               | 52.4 | 21.3  | .8    | .0  |              | 100.0       |             | 100.0      | 100.0    | 100.0    | 100.0    |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1955-1973

NOVEMBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4+* | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 5.3  | 5.8 | 40.3 | 43.5               | 5.0   | .1    | .0  | 11.0  | 100.0    | 3227      |
| 06009 | 4.2  | 5.6 | 38.6 | 45.3               | 6.1   | .1    | .0  | 11.4  | 100.0    | 4572      |
| 12015 | 4.1  | 6.4 | 37.6 | 45.3               | 6.6   | .1    | .0  | 11.4  | 100.0    | 3474      |
| 18021 | 4.3  | 6.3 | 41.4 | 42.8               | 5.1   | .1    | .0  | 10.9  | 100.0    | 4584      |
| TOT   | 704  | 957 | 6266 | 7014               | 901   | 15    | 0   | 11.1  |          | 15857     |
| PCT   | 4.4  | 6.0 | 39.5 | 44.2               | 5.7   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 27.4 | 4.9  | 6.4  | 2.9       |           | 2.2              |
| NE       | 22.3 | 5.4  | 7.0  | 2.8       |           | 2.5              |
| E        | 2.4  | .6   | 1.0  | .6        |           | 3.2              |
| SE       | .4   | *    | .2   | .1        |           | 3.4              |
| S        | 1.0  | .3   | .5   | .1        |           | 3.1              |
| SW       | 1.1  | .2   | .4   | .1        |           | 2.8              |
| W        | .7   | .2   | .4   | .1        |           | 3.1              |
| NW       | 2.2  | .6   | .7   | .3        |           | 2.6              |
| VAR      | .0   | .0   | .0   | .0        |           | 1.9              |
| CALM     | 4.7  | .6   | .8   | .5        |           | 2.4              |
| TOT OBS  | 4153 | 866  | 1148 | 506       | 6673      |                  |
| TOT PCT  | 62.2 | 13.0 | 17.2 | 7.6       | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .2  | .0  | .1  | .3  | 1.0  | 1.3  | .6   | .4   | .4   | .8    | 36.6    |       |
| NE      | .1  | .0  | .1  | .4  | 1.2  | 1.1  | .9   | .6   | .2   | .7    | 32.3    |       |
| E       | .1  | .0  | *   | .1  | .2   | .3   | .1   | .1   | .1   | .1    | 3.5     |       |
| SE      | .0  | .0  | *   | *   | *    | .1   | .1   | *    | .0   | *     | .5      |       |
| S       | .0  | .0  | .0  | *   | .1   | .1   | .1   | .0   | .0   | *     | 1.5     |       |
| SW      | *   | .0  | .0  | *   | .1   | .1   | *    | .0   | *    | *     | 1.6     |       |
| W       | *   | .0  | *   | .0  | *    | .1   | *    | *    | *    | *     | 1.1     |       |
| NW      | *   | .0  | .0  | *   | .2   | .2   | .1   | *    | *    | *     | 3.2     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .1  | .0  | .0  | .2  | .1   | .2   | .1   | .0   | .1   | *     | 5.8     |       |
| TOT OBS | 35  | 0   | 11  | 74  | 204  | 228  | 132  | 72   | 55   | 114   | 5748    | 6673  |
| TOT PCT | .5  | .0  | .2  | 1.1 | 3.1  | 3.4  | 2.0  | 1.1  | .8   | 1.7   | 86.1    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | * OR >10  | * OR >5 | * OR >2 | * OR >1 | * OR >1/2 | * OR >1/4 | * OR >50YD | * OR >0 |
| * OR >6500     | 1.9       | 2.5     | 2.5     | 2.5     | 2.5       | 2.5       | 2.5        | 2.5     |
| * OR >5000     | 2.7       | 3.5     | 3.6     | 3.6     | 3.6       | 3.6       | 3.6        | 3.6     |
| * OR >3500     | 3.9       | 5.2     | 5.6     | 5.6     | 5.6       | 5.6       | 5.6        | 5.6     |
| * OR >2000     | 6.3       | 8.4     | 8.9     | 9.0     | 9.0       | 9.0       | 9.0        | 9.0     |
| * OR >1000     | 8.7       | 11.3    | 12.0    | 12.1    | 12.1      | 12.1      | 12.1       | 12.1    |
| * OR >600      | 9.4       | 12.3    | 13.1    | 13.2    | 13.2      | 13.2      | 13.2       | 13.2    |
| * OR >300      | 9.5       | 12.5    | 13.2    | 13.3    | 13.4      | 13.4      | 13.4       | 13.4    |
| * OR >150      | 9.5       | 12.5    | 13.2    | 13.3    | 13.4      | 13.4      | 13.4       | 13.4    |
| * OR >0        | 9.5       | 12.6    | 13.4    | 13.5    | 13.6      | 13.7      | 13.9       | 13.9    |
| TOTAL          | 644       | 861     | 918     | 927     | 930       | 941       | 951        | 952     |

TOTAL NUMBER OF OBS: 6858

PCT FREQ NH <5/8: 86.1

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 52.8 | 13.1 | 9.1 | 6.0 | 4.4 | 3.0 | 3.0 | 3.3 | 4.9 | .5    | 7148      |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

NOVEMBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | .1   | *   | .0 | *   | *   | *   | *   | .0  | .1   | .5    |              |
|              | TOT %  | .2   | .1   | *   | .0 | *   | *   | *   | *   | .0  | .1   | .5    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0  | *   | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | .1   | .3   | *   | .0 | .0  | *   | *   | *   | .0  | *    | .5    |              |
|              | TOT %  | .1   | .3   | *   | .0 | .0  | *   | *   | *   | .0  | *    | .5    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .2   | .1  | .0 | .0  | .0  | *   | *   | .0  | *    | .4    |              |
|              | TOT %  | .1   | .2   | .1  | .0 | .0  | .0  | *   | *   | .0  | *    | .4    |              |
| 2<5          | PCP    | *    | .0   | .0  | *  | *   | *   | .0  | *   | .0  | *    | .1    |              |
|              | NO PCP | .7   | .7   | .2  | *  | *   | *   | *   | .1  | .0  | .1   | 2.0   |              |
|              | TOT %  | .8   | .7   | .2  | *  | *   | *   | *   | .1  | .0  | .1   | 2.1   |              |
| 5<10         | PCP    | .1   | .1   | *   | *  | *   | *   | *   | *   | .0  | *    | .4    |              |
|              | NO PCP | 7.2  | 7.6  | 1.1 | .1 | .3  | .3  | .4  | .7  | .0  | 1.4  | 19.2  |              |
|              | TOT %  | 7.3  | 7.7  | 1.1 | .2 | .3  | .4  | .4  | .7  | .0  | 1.4  | 19.5  |              |
| 10+          | PCP    | .1   | .1   | *   | *  | *   | .0  | *   | *   | .0  | .0   | .3    |              |
|              | NO PCP | 32.3 | 29.1 | 3.3 | .6 | 1.5 | 1.4 | 1.0 | 3.0 | .0  | 4.6  | 76.7  |              |
|              | TOT %  | 32.4 | 29.2 | 3.3 | .6 | 1.5 | 1.4 | 1.1 | 3.0 | .0  | 4.6  | 77.0  |              |
| TOT OBS      |        |      |      |     |    |     |     |     |     |     |      |       | 8254         |
| TOT PCT      |        | 40.9 | 38.2 | 4.7 | .8 | 1.8 | 1.9 | 1.5 | 3.9 | .0  | 6.3  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .1   | *    | *   | .0 | *   | *   | *   | *   | .0  | .1   | .2    |              |
|              | 4-10       | .1   | *    | *   | .0 | *   | *   | *   | *   | .0  | *    | .2    |              |
|              | 11-21      | *    | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .2   | .1   | *   | .0 | *   | *   | *   | *   | .0  | .1   | .4    |              |
| 1/2<1        | 0-3        | *    | .0   | *   | .0 | .0  | *   | *   | *   | .0  | *    | *     |              |
|              | 4-10       | .1   | *    | .0  | .0 | .0  | *   | *   | *   | .0  | .1   | .1    |              |
|              | 11-21      | *    | .1   | *   | .0 | .0  | *   | .0  | *   | .0  | .2   | *     |              |
|              | 22+        | *    | *    | *   | .0 | .0  | .0  | .0  | .0  | .0  | *    | *     |              |
|              | TOT %      | .1   | .2   | *   | .0 | .0  | *   | *   | *   | .0  | *    | .4    |              |
| 1<2          | 0-3        | *    | *    | .0  | .0 | *   | *   | *   | *   | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | *   | *  | .0  | .0  | .0  | *   | .0  | .1   | .1    |              |
|              | 11-21      | *    | .1   | *   | .0 | .0  | .0  | .0  | .0  | .0  | .1   | .1    |              |
|              | 22+        | .0   | *    | .0  | .0 | .0  | .0  | *   | .0  | .0  | *    | *     |              |
|              | TOT %      | .1   | .1   | *   | *  | *   | *   | *   | *   | .0  | *    | .4    |              |
| 2<5          | 0-3        | .1   | *    | *   | *  | *   | *   | .0  | *   | .0  | .1   | .4    |              |
|              | 4-10       | .2   | .2   | .1  | *  | *   | *   | *   | *   | .0  | .7   | .9    |              |
|              | 11-21      | .3   | .5   | .1  | *  | *   | *   | .0  | *   | .0  | .1   | .1    |              |
|              | 22+        | .1   | *    | *   | .0 | .0  | .0  | .0  | .0  | .0  | .1   | .1    |              |
|              | TOT %      | .7   | .8   | .2  | .1 | .1  | *   | *   | .1  | .0  | .1   | 2.1   |              |
| 5<10         | 0-3        | .4   | .2   | .1  | .1 | *   | .1  | .1  | .1  | .0  | 1.2  | 2.4   |              |
|              | 4-10       | 2.8  | 2.9  | .5  | .1 | .1  | .2  | .2  | .4  | .0  | 7.2  | 7.2   |              |
|              | 11-21      | 2.9  | 3.8  | .5  | *  | *   | *   | .1  | .1  | .0  | 7.5  | 7.5   |              |
|              | 22+        | .3   | .5   | .1  | .0 | .0  | .0  | *   | *   | .0  | .8   | .8    |              |
|              | TOT %      | 6.4  | 7.4  | 1.1 | .2 | .2  | .3  | .3  | .6  | .0  | 1.2  | 17.9  |              |
| 10+          | 0-3        | 1.5  | 1.0  | .2  | .1 | .3  | .2  | .3  | .5  | .0  | 3.8  | 7.9   |              |
|              | 4-10       | 13.3 | 12.2 | 2.0 | .4 | .7  | .9  | .6  | 1.9 | .0  | 32.0 | 32.0  |              |
|              | 11-21      | 13.6 | 18.7 | 1.6 | .1 | .3  | .2  | .1  | .4  | .0  | 34.9 | 34.9  |              |
|              | 22+        | 1.0  | 2.8  | .2  | .0 | *   | .0  | *   | *   | .0  | 4.0  | 4.0   |              |
|              | TOT %      | 29.4 | 34.7 | 4.0 | .6 | 1.3 | 1.2 | 1.0 | 2.8 | .0  | 3.8  | 78.8  |              |
| TOT OBS      |            |      |      |     |    |     |     |     |     |     |      |       | 11341        |
| TOT PCT      |            | 36.9 | 43.3 | 5.5 | .9 | 1.6 | 1.6 | 1.4 | 3.5 | .0  | 5.3  | 100.0 |              |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

# NOVEMBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL<br>954 | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------|--------------------|--------------|
| 00003          | .2         | .0         | .2         | .8         | 3.2          | 2.7          | 1.5          | .7           | .7           | 2.1   | 12.3         | 87.7               | 1638         |
| 06009          | .5         | .0         | .4         | .8         | 3.4          | 3.3          | 1.3          | .7           | .8           | 1.5   | 12.6         | 87.4               | 1669         |
| 12015          | .9         | .0         | .1         | 1.2        | 2.4          | 3.5          | 2.1          | 1.2          | .8           | 1.3   | 13.6         | 86.4               | 1922         |
| 18021          | .3         | .0         | .1         | 1.4        | 3.2          | 3.7          | 2.5          | 1.6          | .8           | 1.8   | 15.4         | 84.6               | 1823         |
| TOT            | 35         | 0          | 12         | 76         | 213          | 235          | 134          | 75           | 56           | 118   | 954          | 6098               | 7052         |
| PCT            | .5         | .0         | .2         | 1.1        | 3.0          | 3.3          | 1.9          | 1.1          | .8           | 1.7   | 13.5         | 86.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .3    | .4  | 1.7 | 17.4 | 80.1 | 2553         |
| 06009          | .4   | .5    | .3  | 1.5 | 19.8 | 77.5 | 3118         |
| 12015          | 1.1  | .4    | .3  | 2.8 | 15.3 | 80.2 | 2757         |
| 18021          | .4   | .5    | .6  | 2.4 | 19.0 | 77.1 | 3188         |
| TOT            | 55   | 50    | 44  | 242 | 2092 | 9133 | 11616        |
| PCT            | .5   | .4    | .4  | 2.1 | 18.0 | 78.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .3            | .6         | 2.8         | 10.7            | 86.5              | 1582         |
| 06009          | .5            | 1.0        | 3.2         | 11.2            | 85.6              | 1611         |
| 12015          | .9            | 1.2        | 5.4         | 10.7            | 83.9              | 1878         |
| 18021          | .3            | .4         | 5.1         | 12.3            | 82.5              | 1787         |
| TOT            | 35            | 56         | 289         | 772             | 5797              | 6858         |
| PCT            | .5            | .8         | 4.2         | 11.3            | 84.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 1            | *           |
| 85/89  | .0   | .0    | .0    | .1    | .1    | .1    | *     | .0     | 13           | .2          |
| 80/84  | .0   | .0    | *     | .2    | .8    | .6    | .2    | *      | 108          | 1.9         |
| 75/79  | .0   | .0    | .1    | 1.0   | 3.8   | 7.4   | 4.2   | 1.6    | 1044         | 18.0        |
| 70/74  | .0   | .0    | .1    | 1.1   | 6.2   | 17.7  | 16.8  | 7.4    | 2851         | 49.2        |
| 65/69  | .0   | .0    | *     | .4    | 1.5   | 6.0   | 14.1  | 7.7    | 1723         | 29.8        |
| 60/64  | .0   | .0    | .0    | .0    | *     | .1    | .2    | .4     | 49           | .8          |
| TOTAL  | 0    | 0     | 17    | 161   | 717   | 1846  | 2057  | 991    | 5789         | 100.0       |
| PCT    | .0   | .0    | .3    | 2.8   | 12.4  | 31.9  | 35.5  | 17.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|-----|-----|-----|-----|-----|------|
| .0   | *    | .0  | .0 | .0  | .0  | .0  | .0  | .0  | .0   |
| .1   | .1   | *   | *  | .0  | .0  | .0  | .0  | .0  | *    |
| .7   | 1.0  | .1  | *  | .0  | .0  | *   | .1  | .0  | *    |
| 6.8  | 7.0  | 1.3 | .2 | .3  | .4  | .4  | .8  | .0  | .9   |
| 19.4 | 19.7 | 2.4 | .4 | 1.0 | 1.2 | .7  | 2.0 | .0  | 2.4  |
| 13.0 | 11.5 | 1.1 | .2 | .6  | .5  | .4  | 1.0 | .0  | 1.5  |
| .3   | .5   | *   | *  | *   | .0  | .0  | .0  | .0  | .1   |
| 40.3 | 39.7 | 5.0 | .8 | 1.9 | 2.1 | 1.4 | 3.9 | .0  | 4.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 85  | 78  | 76  | 70  | 64 | 60 | 50  | 70.2 | 3291         |
| 06009          | 83  | 79  | 76  | 70  | 64 | 59 | 50  | 70.1 | 4606         |
| 12015          | 90  | 83  | 80  | 73  | 66 | 61 | 52  | 72.7 | 3440         |
| 18021          | 90  | 82  | 79  | 72  | 66 | 63 | 51  | 72.1 | 4531         |
| TOT            | 90  | 81  | 78  | 71  | 65 | 61 | 50  | 71.3 | 15868        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.2   | 7.4   | 27.8  | 41.1  | 22.5   | 82   | 1431         |
| 06009          | .0   | 2.1   | 9.0   | 25.8  | 38.2  | 24.8   | 82   | 1498         |
| 12015          | .0   | 6.3   | 18.9  | 35.0  | 29.4  | 10.5   | 76   | 1511         |
| 18021          | .0   | 2.4   | 13.1  | 37.0  | 34.7  | 12.8   | 79   | 1553         |
| TOT            | 0    | 181   | 729   | 1889  | 2143  | 1051   | 80   | 5993         |

## NOVEMBER

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1855-1973

TABLE 17

AREA 0006 CAPE BLANC  
20.4N 10.1WPCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0       | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | *        | .0       | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | .1       | *        | *        | 13    | *        | .2        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | .1       | .3       | .1       | *        | *        | 43    | *        | .5        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .1       | .4       | .3       | .1       | *        | .0       | 70    | .1       | .8        |
| 7/8                | .0       | .0       | .0       | .0       | *        | .4       | .6       | .4       | .2       | *        | .0       | 134   | .1       | 1.7       |
| 6                  | .0       | .0       | .0       | .0       | *        | .5       | .7       | .3       | *        | *        | .0       | 116   | *        | 1.5       |
| 5                  | .0       | .0       | .0       | *        | .2       | 1.0      | 1.0      | .4       | .1       | *        | .0       | 211   | .1       | 2.6       |
| 4                  | .0       | .0       | .0       | .1       | .6       | 1.9      | 1.0      | .6       | .1       | *        | .0       | 335   | .1       | 4.3       |
| 3                  | .0       | .0       | .0       | *        | .8       | 2.3      | 1.7      | .5       | .1       | *        | .0       | 422   | .1       | 5.3       |
| 2                  | .0       | .0       | .0       | .4       | 2.3      | 3.7      | 2.3      | .9       | .1       | *        | .0       | 743   | .3       | 9.3       |
| 1                  | .0       | .0       | *        | .2       | 3.4      | 5.0      | 2.9      | .9       | .1       | .0       | .0       | 970   | .2       | 12.4      |
| 0                  | .0       | .0       | .1       | .4       | 3.8      | 5.5      | 3.5      | 1.2      | .1       | .0       | .0       | 1127  | .5       | 14.1      |
| -1                 | .0       | .0       | *        | .3       | 3.6      | 4.9      | 3.6      | .6       | *        | .0       | .0       | 1008  | .3       | 12.7      |
| -2                 | .0       | .0       | .1       | .4       | 2.4      | 4.2      | 2.9      | .5       | *        | .0       | .0       | 807   | .3       | 10.2      |
| -3                 | .0       | .0       | .0       | .3       | 1.4      | 3.0      | 1.9      | .2       | *        | .0       | .0       | 529   | .1       | 6.7       |
| -4                 | .0       | *        | *        | .5       | 1.0      | 2.4      | 1.2      | .2       | .0       | .0       | .0       | 408   | .1       | 5.2       |
| -5                 | .0       | .0       | .1       | .6       | 1.0      | 1.6      | .6       | .1       | .0       | .0       | .0       | 301   | .1       | 3.8       |
| -6                 | .0       | .0       | .1       | .3       | .4       | .7       | .2       | .0       | .0       | .0       | .0       | 125   | *        | 1.6       |
| -7/-8              | .0       | .0       | .2       | .6       | .4       | .7       | .3       | .0       | .0       | .0       | .0       | 163   | *        | 2.1       |
| -9/-10             | .0       | *        | .2       | .2       | .3       | .3       | .1       | *        | .0       | .0       | .0       | 89    | *        | 1.1       |
| -11/-13            | *        | .1       | .2       | .2       | .2       | .1       | .0       | .0       | .0       | .0       | .0       | 61    | .1       | .7        |
| -14/-16            | .1       | .2       | *        | .1       | .1       | *        | .0       | .0       | .0       | .0       | .0       | 43    | .1       | .5        |
| -17/-19            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 9     | *        | .1        |
| TOTAL              | 21       | 30       | 75       | 347      | 169*     | 2959     | 1926     | 563      | 93       | 15       | 3        | 7730  | 194      | 7536      |
| PCT                | .3       | .4       | 1.0      | 4.5      | 22.0     | 38.3     | 24.9     | 7.3      | 1.2      | .2       | *        | 100.0 | 2.5      | 97.5      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | 1.2 | 3.2  | .2    | .0    | .0    | .0  | 4.6  | .6  | 1.6  | .1    | .0    | .0    | .0  | 2.3  |
| 1-2     | .7  | 9.0  | 2.9   | .0    | .0    | .0  | 12.6 | .2  | 5.9  | 2.5   | .0    | .0    | .0  | 8.6  |
| 3-4     | .1  | 4.9  | 8.6   | .3    | .0    | .0  | 13.9 | .1  | 3.7  | 8.0   | .5    | .0    | .0  | 12.2 |
| 5-6     | *   | .8   | 5.4   | .4    | .0    | .0  | 5.6  | *   | .8   | 6.3   | .7    | .0    | .0  | 7.8  |
| 7       | .0  | .1   | 2.6   | .5    | .0    | .0  | 3.2  | .0  | .2   | 3.0   | .7    | *     | .0  | 3.9  |
| 8-9     | .0  | *    | .7    | .4    | .0    | .0  | 1.0  | .0  | *    | .8    | .4    | .0    | .0  | 1.2  |
| 10-11   | .0  | .2   | .2    | .0    | .0    | .0  | .4   | .0  | *    | .3    | .3    | .0    | .0  | .6   |
| 12      | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | *    | *     | *     | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 2.0 | 18.1 | 20.6  | 1.9   | .0    | .0  | 42.6 | .9  | 12.3 | 21.1  | 2.6   | *     | .0  | 36.9 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .3   | *     | .0    | .0    | .0  | .6  | *   | .1   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .1  | 1.0  | .4    | .0    | .0    | .0  | 1.5 | *   | .2   | .1    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .4   | .6    | *     | .0    | .0  | 1.0 | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .1   | .4    | *     | .0    | .0  | .5  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 1.9  | 1.6   | .2    | .0    | .0  | 3.9 | .1  | .3   | .1    | .0    | .0    | .0  | .5  |



PERIOD: (OVER-ALL) 1963-1973

NOVEMBER

AREA 0006 CAPE BLANC  
20.4N 18.1W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .3   | .0    | .0    | .0    | .0  | .4  | .1  | .2   | .0    | .0    | .0    | .0  | .3  |
| 1-2     | .1  | .5   | .2    | .0    | .0    | .0  | .8  | .2  | .6   | .1    | .0    | .0    | .0  | .9  |
| 3-4     | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | .3   | .2    | .0    | .0    | .0  | .5  |
| 5-6     | .0  | .1   | *     | .0    | .0    | .0  | .1  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | .9   | .4    | .0    | .0    | .0  | 1.6 | .2  | 1.2  | .3    | .0    | .0    | .0  | 1.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .3  | .7   | .0    | .0    | .0    | .0  | .9  |           |
| 1-2     | .2  | .3   | .1    | .0    | .0    | .0  | .5  | .1  | 1.3  | .1    | .0    | .0    | .0  | 1.5 |           |
| 3-4     | *   | .1   | *     | .0    | .0    | .0  | .1  | .0  | .5   | .4    | .0    | .0    | .0  | .9  |           |
| 5-6     | *   | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .1    | .0    | .0    | .0  | .3  |           |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .1    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .4  | .6   | .1    | .0    | .0    | .0  | 1.2 | .4  | 2.6  | .7    | *     | .0    | .0  | 3.7 | 92.2      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 11.3 | 6.7  | .2    | .0    | .0    | .0  | 18.2  |         |
| 1-2     | 1.7  | 18.7 | 6.2   | .0    | .0    | .0  | 26.7  |         |
| 3-4     | .2   | 10.0 | 17.6  | .8    | .0    | .0  | 28.6  |         |
| 5-6     | .1   | 1.9  | 12.2  | 1.1   | .0    | .0  | 15.3  |         |
| 7       | .0   | .3   | 5.8   | 1.2   | *     | .0  | 7.3   |         |
| 8-9     | .0   | *    | 1.5   | .9    | .0    | .0  | 2.4   |         |
| 10-11   | .0   | *    | .5    | .5    | .0    | .0  | 1.1   |         |
| 12      | .0   | .0   | .1    | .2    | .0    | .0  | .3    |         |
| 13-16   | .0   | .1   | .1    | *     | .0    | .0  | .2    |         |
| 17-19   | .0   | .0   | *     | .0    | .0    | .0  | *     |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 13.3 | 37.7 | 44.3  | 4.6   | *     | .0  | 100.0 | 5034    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.3 | 11.6 | 12.6 | 7.1  | 3.1  | .9  | .3    | *   | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2216  | 3        |
| 6-7          | *   | 1.9  | 6.0  | 6.8  | 3.8  | 1.7 | .8    | .4  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1267  | 5        |
| 8-9          | .0  | .5   | 2.1  | 2.9  | 2.5  | 1.6 | .9    | .2  | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 650   | 6        |
| 10-11        | .0  | .7   | .8   | .7   | 1.0  | .7  | .5    | .1  | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 263   | 6        |
| 12-13        | .0  | .0   | .9   | .4   | .3   | .2  | .2    | .1  | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 135   | 6        |
| >13          | .0  | .0   | .0   | .3   | .1   | .1  | .1    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 52    | 8        |
| INDET        | 6.3 | 4.2  | 4.5  | 3.7  | 1.4  | .7  | .3    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1243  | 3        |
| TOTAL        | 503 | 1100 | 1564 | 1273 | 717  | 343 | 192   | 61  | 61    | 11    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 5826  | 4        |
| PCT          | 8.6 | 18.9 | 26.8 | 21.9 | 12.3 | 5.9 | 3.3   | 1.0 | 1.0   | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

DECEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AREA 0006 CAPE BLANC  
20.4N 18.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WND DIR            | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THOR LTNG               | FGG WQ PCPN | FGG WQ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | .2   | .1        | .0   | .0        | .0   | .0              | *    | .3              | .2             | .6                      | 1.0         | .0                  | 1.7        | .8              | 95.6       |
| NE                 | .1   | .1        | *    | .0        | .0   | .0              | .0   | .2              | .2             | .4                      | 1.2         | .0                  | 2.2        | 1.2             | 94.7       |
| E                  | .1   | .5        | .1   | .0        | .0   | .0              | .0   | .7              | .0             | .5                      | 2.6         | .0                  | 7.5        | 3.6             | 85.2       |
| SE                 | .0   | .9        | 1.8  | .0        | .0   | .0              | .0   | 2.7             | 1.8            | 2.7                     | .9          | .0                  | 6.3        | .0              | 85.7       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 3.4         | .0                  | 5.7        | .0              | 90.9       |
| SW                 | .0   | 2.0       | .0   | .0        | .0   | .0              | .0   | 2.0             | .0             | .0                      | 2.9         | .0                  | 2.0        | .0              | 93.2       |
| W                  | .0   | 2.1       | .0   | .0        | .0   | .0              | .0   | 2.1             | 2.6            | 1.1                     | .0          | .0                  | .0         | .0              | 94.2       |
| NW                 | 1.1  | .7        | .0   | .0        | .0   | .0              | .0   | 1.9             | 1.9            | .1                      | 2.5         | .0                  | .2         | .5              | 93.0       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .8             | .0                      | 1.2         | .0                  | 1.2        | .8              | 96.1       |
| TOT PCT            | .2   | .2        | *    | .0        | .0   | .0              | *    | .4              | .2             | .5                      | 1.3         | .0                  | 2.4        | 1.2             | 94.1       |
| TOT OBS:           | 8444 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                    |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|--------------------|---------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FGG WQ<br>PCPN | FGG WQ<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG WEA |
| 0003          | .2                 | .1           | *    | .0           | .0   | .0                    | *    | .4                      | .2                | .6           | 1.0            | *                         | 2.2           | 1.0                | 94.6          |
| 0609          | .3                 | .2           | .1   | .0           | .0   | .0                    | .0   | .6                      | .2                | 1.0          | 1.3            | .0                        | 1.6           | 1.1                | 94.2          |
| 1215          | .1                 | *            | .0   | .0           | .0   | .0                    | .0   | .1                      | .3                | .0           | 1.1            | .0                        | 2.2           | 1.0                | 95.3          |
| 1821          | .1                 | .2           | .0   | .0           | .0   | .0                    | .0   | .3                      | .2                | .2           | 2.0            | .0                        | 3.5           | 1.7                | 92.0          |
| TOT PCT       | .2                 | .2           | *    | .0           | .0   | .0                    | *    | .4                      | .2                | .5           | 1.3            | *                         | 2.4           | 1.2                | 94.0          |
| TOT OBS:      | 8621               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                    |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |  |  |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|--|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    |       |           |          |          | 06         | 09    | 12    | 15    | 18    | 21    |  |  |
| N        | 1.3                | 10.5 | 12.5  | 1.2   | *     | .0 | 25.6  | 11.7  | 31.5      | 32.3     | 25.3     | 14.6       | 19.1  | 24.0  | 31.8  | 25.0  |       |  |  |
| NE       | 1.1                | 17.7 | 29.4  | 5.2   | .2    | .0 | 53.6  | 13.5  | 51.2      | 52.7     | 55.1     | 58.7       | 57.0  | 59.9  | 48.7  | 52.6  |       |  |  |
| E        | .6                 | 4.6  | 5.4   | 1.2   | *     | .0 | 11.8  | 12.6  | 8.3       | 9.8      | 11.2     | 18.0       | 14.9  | 11.3  | 9.8   | 12.3  |       |  |  |
| SE       | .3                 | .8   | .3    | .1    | *     | .0 | 1.4   | 8.1   | 1.0       | .0       | 1.2      | 2.2        | 2.0   | 1.2   | 1.1   | 1.9   |       |  |  |
| S        | .3                 | .4   | .1    | *     | *     | .0 | .8    | 5.9   | .7        | .0       | .7       | 1.1        | 1.0   | .5    | .7    | 1.2   |       |  |  |
| SW       | .3                 | .4   | .1    | *     | .0    | .0 | .8    | 6.3   | .8        | .0       | 1.0      | 1.1        | .8    | .1    | .6    | 1.2   |       |  |  |
| W        | .2                 | .6   | .2    | *     | .0    | .0 | 1.0   | 7.3   | 1.0       | 1.1      | 1.0      | 1.0        | .9    | .8    | 1.3   | .8    |       |  |  |
| NW       | .4                 | 1.2  | .4    | *     | .0    | .0 | 2.0   | 7.8   | 2.3       | 2.3      | 1.8      | 1.4        | 1.7   | 2.0   | 2.6   | 2.4   |       |  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .3 | .0    | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    |       |  |  |
| CALM     | 2.8                |      |       |       |       |    | 2.8   | .0    | 3.2       | 1.7      | 2.8      | 1.9        | 2.7   | .0    | 3.3   | 2.6   |       |  |  |
| TOT OBS  | 1139               | 5656 | 7562  | 1219  | 42    | 0  | 15618 |       | 12.2      | 3079     | 174      | 3086       | 1378  | 3274  | 184   | 3073  | 1370  |  |  |
| TOT PCT  | 7.3                | 36.2 | 48.4  | 7.8   | .3    | .0 |       | 100.0 |           | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |  |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|-------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |       |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 5.2  | 15.1               | 5.1   | .2    | .0       |       | 25.6         | 11.7        | 31.5        | 22.0       | 19.3     | 29.7     |  |
| NE       | 6.1  | 30.5               | 15.8  | 1.2   | *        |       | 53.6         | 13.5        | 51.3        | 56.2       | 57.2     | 49.9     |  |
| E        | 2.3  | 6.1                | 3.2   | .3    | .0       |       | 11.8         | 12.6        | 8.4         | 13.3       | 14.7     | 10.6     |  |
| SE       | .8   | .5                 | .1    | *     | .0       |       | 1.4          | 8.1         | .9          | 1.5        | 1.9      | 1.4      |  |
| S        | .6   | .2                 | *     | *     | .0       |       | .8           | 5.9         | .7          | .8         | 1.0      | .9       |  |
| SW       | .5   | .3                 | *     | .0    | .0       |       | .8           | 6.3         | .8          | 1.0        | .8       | .8       |  |
| W        | .6   | .4                 | .1    | *     | .0       |       | 1.0          | 7.3         | 1.0         | 1.0        | .9       | 1.1      |  |
| NW       | 1.1  | .8                 | .2    | *     | .0       |       | 2.0          | 7.8         | 2.3         | 1.7        | 1.7      | 2.5      |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |       | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 2.8  |                    |       |       |          |       | 2.8          | .0          | 3.1         | 2.5        | 2.6      | 3.1      |  |
| TOT OBS  | 3115 | 8414               | 3813  | 272   | 4        | 15618 |              | 12.2        | 3253        | 4464       | 3458     | 4443     |  |
| TOT PCT  | 19.9 | 53.9               | 24.4  | 1.7   | *        |       | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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20.4N 18.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|----------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003    | 3.1  | 4.1 | 35.9 | 50.1  | 6.5   | .2    | .0  | 12.1 | 100.0    | 3253      |
| 06009    | 2.5  | 4.4 | 35.0 | 49.5  | 8.3   | .2    | .0  | 12.4 | 100.0    | 4464      |
| 12015    | 2.6  | 4.0 | 33.3 | 50.2  | 9.4   | .4    | .0  | 12.8 | 100.0    | 3458      |
| 18021    | 3.1  | 5.2 | 39.9 | 44.6  | 7.0   | .2    | .0  | 11.6 | 100.0    | 4443      |
| TOT      | 443  | 696 | 5656 | 7562  | 1219  | 42    | 0   | 12.2 |          | 15618     |
| PCT      | 2.8  | 4.5 | 36.2 | 48.4  | 7.8   | .3    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 22.5 | 3.8  | 4.8  | 1.3       |           | 1.9              |
| NE       | 34.1 | 6.7  | 8.2  | 3.0       |           | 2.1              |
| E        | 5.2  | 1.0  | 1.2  | .4        |           | 2.1              |
| SE       | .3   | *    | .1   | *         |           | 2.6              |
| S        | .2   | .1   | .1   | *         |           | 3.0              |
| SW       | .2   | .1   | .1   | *         |           | 2.4              |
| W        | .5   | .2   | .3   | *         |           | 2.8              |
| NW       | 1.2  | .4   | .5   | .2        |           | 2.8              |
| VAR      | .0   | .0   | .0   | .0        |           | 1.3              |
| CALM     | 2.6  | .2   | .4   | .1        |           | 1.3              |
| TOT OBS  | 4722 | 879  | 1100 | 359       | 7060      | 2.0              |
| TOT PCT  | 66.9 | 12.5 | 15.6 | 5.1       | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .1         | *          | .0         | .2         | .5           | .8           | .6           | .2           | .2           | .7    | 29.0               |              |
| NE      | *          | *          | .1         | .5         | 1.1          | 1.2          | 1.0          | .4           | .4           | 1.0   | 46.3               |              |
| E       | *          | .0         | *          | .1         | .1           | .2           | .1           | *            | .0           | .1    | 7.2                |              |
| SE      | .0         | .0         | .0         | *          | *            | *            | .0           | .0           | .0           | *     | .4                 |              |
| S       | .0         | .0         | .0         | .0         | *            | .0           | *            | .0           | .0           | *     | .3                 |              |
| SW      | .0         | .0         | .0         | .0         | *            | *            | .0           | .0           | .0           | *     | .3                 |              |
| W       | .0         | .0         | .0         | .0         | *            | *            | .0           | *            | .0           | *     | .9                 |              |
| NW      | *          | .0         | .0         | *          | .1           | .1           | .1           | *            | *            | *     | 1.9                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | *          | .1           | .1           | .1           | *            | .1           | .0    | 3.0                |              |
| TOT OBS | 11         | 3          | 6          | 61         | 140          | 174          | 133          | 44           | 47           | 133   | 6308               | 7060         |
| TOT PCT | .2         | *          | .1         | .9         | 2.0          | 2.5          | 1.9          | .6           | .7           | 1.9   | 89.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | VSBY (NM)<br>= OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
|-------------------|-------------|------------|------------|-------------------------|--------------|--------------|---------------|------------|
| = OR >6500        | 2.1         | 2.5        | 2.6        | 2.6                     | 2.6          | 2.6          | 2.6           | 2.6        |
| = OR >5000        | 2.7         | 3.1        | 3.2        | 3.2                     | 3.2          | 3.2          | 3.2           | 3.2        |
| = OR >3500        | 4.3         | 4.9        | 5.1        | 5.1                     | 5.1          | 5.1          | 5.1           | 5.1        |
| = OR >2000        | 6.5         | 7.4        | 7.6        | 7.6                     | 7.6          | 7.6          | 7.6           | 7.6        |
| = OR >1000        | 8.4         | 9.4        | 9.7        | 9.7                     | 9.7          | 9.7          | 9.7           | 9.7        |
| = OR >600         | 9.1         | 10.2       | 10.5       | 10.5                    | 10.5         | 10.6         | 10.6          | 10.6       |
| = OR >300         | 9.2         | 10.3       | 10.6       | 10.6                    | 10.6         | 10.6         | 10.6          | 10.6       |
| = OR >150         | 9.2         | 10.3       | 10.6       | 10.7                    | 10.7         | 10.7         | 10.7          | 10.7       |
| = OR >0           | 9.2         | 10.4       | 10.8       | 10.8                    | 10.8         | 10.8         | 10.8          | 10.8       |
| TOTAL             | 661         | 746        | 773        | 775                     | 775          | 776          | 777           | 777        |

TOTAL NUMBER OF OBS: 7174

PCT FREQ NH <5/8: 89.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL<br>OBS |
|--|------|------|-----|-----|-----|-----|-----|-----|---------|--------------|
|  | 59.8 | 12.2 | 7.3 | 5.7 | 3.6 | 2.4 | 2.9 | 2.8 | 3.2     | 7427         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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20.4N 18.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N     | NE    | E     | SE    | S     | SW    | W     | NW    | VAR   | CALM  | PCT   | TOTAL<br>OBS |
|--------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| <1/2         | PCP    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0           |
|              | NO PCP | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1           |
|              | TOT %  | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1           |
| 1/2<1        | PCP    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0           |
|              | NO PCP | .1    | .3    | .1    | * * * | .0    | .0    | .0    | * * * | .0    | .0    | .0    | .5           |
|              | TOT %  | .1    | .3    | .1    | * * * | .0    | .0    | .0    | * * * | .0    | .0    | .0    | .5           |
| 1<2          | PCP    | .0    | .0    | * * * | .0    | .0    | .0    | .0    | .0    | .0    | .0    | * * * | .7           |
|              | NO PCP | .1    | .3    | .2    | .1    | * * * | * * * | .0    | .0    | .0    | * * * | * * * | .7           |
|              | TOT %  | .1    | .3    | .2    | .1    | * * * | * * * | .0    | .0    | .0    | * * * | * * * | .7           |
| 2<5          | PCP    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0           |
|              | NO PCP | .5    | 1.1   | .4    | * * * | * * * | * * * | * * * | * * * | .0    | .1    | 2.2   | 2.2          |
|              | TOT %  | .5    | 1.1   | .4    | * * * | * * * | * * * | * * * | * * * | .0    | .1    | 2.2   | 2.2          |
| 5<10         | PCP    | .1    | .1    | .1    | * * * | .0    | * * * | * * * | * * * | .0    | .0    | .3    | .3           |
|              | NO PCP | 4.6   | 7.2   | 1.9   | .2    | .1    | .2    | .2    | .3    | .0    | .7    | 15.5  | 15.5         |
|              | TOT %  | 4.7   | 7.3   | 2.0   | .2    | .1    | .2    | .2    | .4    | .0    | .7    | 15.8  | 15.8         |
| 10+          | PCP    | * * * | * * * | .0    | .0    | .0    | .0    | .0    | * * * | .0    | .0    | .1    | .1           |
|              | NO PCP | 26.8  | 42.1  | 5.7   | .4    | .3    | .4    | .9    | 1.9   | .0    | 2.3   | 80.6  | 80.6         |
|              | TOT %  | 26.8  | 42.1  | 5.7   | .4    | .3    | .4    | .9    | 1.9   | .0    | 2.3   | 80.7  | 80.7         |
| TOT OBS      |        | 32.2  | 51.1  | 8.4   | .7    | .5    | .6    | 1.1   | 2.4   | .0    | 3.0   | 100.0 | 8436         |
| TOT PCT      |        |       |       |       |       |       |       |       |       |       |       |       |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N     | NE    | E     | SE    | S     | SW    | W     | NW    | VAR   | CALM  | PCT   | TOTAL<br>OBS |
|--------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| <1/2         | 0-3        | .0    | * * * | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | * * * | .1           |
|              | 4-10       | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .1           |
|              | 11-21      | * * * | * * * | .0    | .0    | .0    | .0    | .0    | * * * | * * * | * * * | * * * | .1           |
|              | 22+        | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | * * * | .0           |
|              | TOT %      | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | * * * | .0    | * * * | .1           |
| 1/2<1        | 0-3        | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | * * * | .2           |
|              | 4-10       | * * * | .1    | * * * | * * * | * * * | .0    | .0    | * * * | * * * | * * * | * * * | .2           |
|              | 11-21      | * * * | .1    | * * * | * * * | .0    | .0    | .0    | * * * | * * * | * * * | * * * | .1           |
|              | 22+        | * * * | * * * | * * * | .0    | .0    | .0    | .0    | .0    | .0    | * * * | * * * | .4           |
|              | TOT %      | .1    | .2    | .1    | * * * | * * * | .0    | .0    | * * * | * * * | .0    | * * * | .4           |
| 1<2          | 0-3        | .0    | .0    | * * * | * * * | * * * | .0    | .0    | .0    | .0    | * * * | * * * | .1           |
|              | 4-10       | .1    | .2    | .1    | .0    | * * * | * * * | .0    | .0    | .0    | * * * | * * * | .4           |
|              | 11-21      | * * * | .1    | .1    | * * * | .0    | .0    | .0    | .0    | .0    | * * * | * * * | .3           |
|              | 22+        | * * * | * * * | .0    | * * * | .0    | .0    | .0    | .0    | .0    | * * * | * * * | .1           |
|              | TOT %      | .1    | .3    | .2    | * * * | * * * | * * * | .0    | .0    | .0    | * * * | * * * | .8           |
| 2<5          | 0-3        | * * * | * * * | * * * | .0    | * * * | .0    | .0    | * * * | .0    | .1    | * * * | .2           |
|              | 4-10       | .2    | .4    | .2    | * * * | * * * | .0    | * * * | * * * | * * * | * * * | * * * | .8           |
|              | 11-21      | .2    | .6    | .3    | * * * | .0    | .0    | .0    | * * * | * * * | * * * | * * * | 1.1          |
|              | 22+        | * * * | .2    | .1    | * * * | .0    | .0    | .0    | .0    | .0    | * * * | * * * | .3           |
|              | TOT %      | .5    | 1.2   | .6    | * * * | * * * | .0    | * * * | * * * | * * * | .1    | * * * | 2.5          |
| 5<10         | 0-3        | .2    | .2    | .1    | * * * | .1    | * * * | * * * | .1    | .0    | .7    | * * * | 1.3          |
|              | 4-10       | 1.8   | 2.9   | .8    | .2    | .1    | .1    | .1    | .2    | .0    | * * * | * * * | 6.2          |
|              | 11-21      | 1.7   | 3.7   | 1.0   | .1    | .0    | * * * | * * * | .1    | .0    | * * * | * * * | 6.5          |
|              | 22+        | .3    | .8    | .2    | * * * | * * * | * * * | .0    | * * * | .0    | * * * | * * * | 1.2          |
|              | TOT %      | 4.0   | 7.5   | 2.1   | .2    | .2    | .2    | .2    | .3    | .0    | .7    | * * * | 15.3         |
| 10+          | 0-3        | 1.1   | .8    | .3    | .1    | .1    | .1    | .1    | .3    | .0    | 2.1   | * * * | 5.0          |
|              | 4-10       | 9.5   | 14.5  | 2.6   | .3    | .2    | .2    | .5    | 1.1   | .0    | * * * | * * * | 29.1         |
|              | 11-21      | 12.3  | 24.9  | 3.3   | .1    | * * * | * * * | .1    | .3    | .0    | * * * | * * * | 41.2         |
|              | 22+        | 1.1   | 3.9   | .6    | * * * | .0    | * * * | * * * | * * * | .0    | * * * | * * * | 5.7          |
|              | TOT %      | 24.0  | 44.1  | 6.8   | .6    | .4    | .4    | .8    | 1.7   | .0    | 2.1   | * * * | 81.0         |
| TOT OBS      |            | 28.7  | 53.3  | 9.8   | .9    | .6    | .6    | 1.0   | 2.1   | .0    | 2.9   | 100.0 | 11590        |
| TOT PCT      |            |       |       |       |       |       |       |       |       |       |       |       |              |

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PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1853-1973AREA 0006 CAPE BLANC  
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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .1         | .1         | .2         | 1.0        | 1.9          | 2.3          | 1.5          | .5           | .6           | 1.5   | 9.5   | 90.5               | 1774         |
| 06009         | .2         | .1         | .0         | .7         | 2.1          | 2.8          | 1.1          | .4           | .4           | 1.8   | 9.6   | 90.4               | 1769         |
| 12015         | .1         | .0         | .1         | .8         | 2.5          | 2.5          | 2.3          | .6           | .7           | 2.0   | 11.5  | 88.5               | 1994         |
| 18021         | .2         | .1         | .1         | .9         | 1.8          | 2.1          | 2.4          | .9           | .9           | 2.1   | 11.6  | 88.4               | 1822         |
| TOT           | 11         | 4          | 6          | 63         | 151          | 180          | 136          | 44           | 49           | 135   | 779   | 6580               | 7359         |
| PCT           | .1         | .1         | .1         | .9         | 2.1          | 2.4          | 1.8          | .6           | .7           | 1.8   | 10.6  | 89.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | *    | .3    | .5  | 2.6 | 14.3 | 82.3 | 2619         |
| 06009         | .2   | .4    | .5  | 2.1 | 17.0 | 79.8 | 3146         |
| 12015         | .1   | .3    | .6  | 2.5 | 13.1 | 83.4 | 2822         |
| 18021         | .1   | .6    | 1.3 | 2.8 | 16.9 | 78.2 | 3180         |
| TOT           | 14   | 48    | 87  | 294 | 1819 | 9505 | 11767        |
| PCT           | .1   | .4    | .7  | 2.5 | 15.5 | 80.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .1            | .3         | 3.8         | 8.2             | 88.1              | 1728         |
| 06009         | .2            | .3         | 2.7         | 8.7             | 88.6              | 1724         |
| 12015         | .1            | .3         | 3.4         | 10.4            | 86.2              | 1937         |
| 18021         | .2            | .4         | 4.1         | 10.1            | 85.7              | 1785         |
| TOT           | 11            | 25         | 251         | 673             | 6250              | 7174         |
| PCT           | .2            | .3         | 3.5         | 9.4             | 87.1              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .0    | *     | *     | *     | *     | .0     | 8            | .1          |
| 75/79  | *    | .0    | .1    | .3    | .6    | 1.0   | .5    | .1     | 171          | 2.7         |
| 70/74  | .0   | *     | .8    | 3.0   | 7.1   | 9.2   | 4.5   | 1.4    | 1639         | 26.0        |
| 65/69  | .0   | *     | .7    | 3.2   | 8.8   | 19.1  | 16.7  | 5.4    | 3407         | 54.0        |
| 60/64  | .0   | .0    | .1    | .5    | 1.8   | 4.7   | 7.2   | 2.9    | 1087         | 17.2        |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | *     | *      | 2            | *           |
| TOTAL  | 1    | 2     | 109   | 448   | 1160  | 2147  | 1829  | 618    | 6314         | 100.0       |
| PCT    | *    | *     | 1.7   | 7.1   | 18.4  | 34.0  | 29.0  | 9.8    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM |
|-------|------|------|-----|----|----|----|-----|-----|-----|------|
| 80/84 | *    | .1   | *   | *  | .0 | .0 | .0  | .0  | .0  | .0   |
| 75/79 | .7   | 1.4  | .4  | *  | *  | *  | *   | .1  | .0  | *    |
| 70/74 | 7.9  | 13.5 | 2.7 | .2 | .1 | .1 | .4  | .6  | .0  | .4   |
| 65/69 | 16.5 | 28.9 | 4.9 | .3 | .4 | .3 | .6  | 1.2 | .0  | .9   |
| 60/64 | 5.5  | 9.9  | 1.1 | .1 | *  | .1 | .1  | .3  | .0  | .2   |
| 55/59 | .0   | *    | .0  | *  | .0 | .0 | .0  | .0  | .0  | .0   |
| TOTAL | 30.6 | 53.7 | 9.1 | .6 | .5 | .5 | 1.2 | 2.2 | .0  | 1.5  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 79  | 75  | 73  | 67  | 62 | 57 | 54  | 67.0 | 3286         |
| 06009         | 85  | 75  | 73  | 67  | 62 | 57 | 50  | 66.9 | 4502         |
| 12015         | 84  | 79  | 76  | 69  | 63 | 61 | 56  | 69.2 | 3433         |
| 18021         | 86  | 79  | 75  | 69  | 64 | 61 | 55  | 68.9 | 4428         |
| TOT           | 86  | 78  | 74  | 68  | 63 | 59 | 50  | 68.0 | 15649        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 4.2   | 11.4  | 34.4  | 36.8  | 13.2   | 79   | 1578         |
| 06009         | .0   | 9.3   | 14.2  | 29.8  | 33.0  | 13.8   | 77   | 1600         |
| 12015         | .0   | 13.4  | 25.4  | 35.2  | 20.7  | 5.3    | 72   | 1635         |
| 18021         | .1   | 7.9   | 21.7  | 36.1  | 26.0  | 8.2    | 75   | 1625         |
| TOT           | 1    | 562   | 1174  | 2182  | 1871  | 648    | 75   | 6438         |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT<br>FOG | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1          | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 1          | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | .1       | .1       | 14         | .0       | .2        |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .2       | .1       | *        | 28         | *        | .3        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .1       | .3       | .1       | *        | 42         | *        | .5        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .4       | .2       | .1       | *        | 72         | *        | .9        |
| 6                  | .0       | .0       | .0       | .0       | .2       | .6       | .3       | *        | .0       | 87         | *        | 1.1       |
| 5                  | .0       | .0       | .0       | .1       | .7       | .8       | .4       | .2       | *        | 181        | *        | 2.3       |
| 4                  | .0       | .0       | .0       | .3       | 1.5      | 1.1      | .5       | .1       | *        | 272        | .1       | 3.4       |
| 3                  | .0       | .0       | .0       | .5       | 2.2      | 1.6      | .5       | .1       | .0       | 385        | .2       | 4.8       |
| 2                  | .0       | .0       | .0       | 1.3      | 3.7      | 2.4      | .8       | .1       | *        | 648        | .1       | 8.1       |
| 1                  | .0       | .0       | *        | 2.5      | 5.3      | 3.5      | 1.3      | .1       | *        | 994        | .1       | 12.6      |
| 0                  | .0       | .0       | *        | 3.9      | 6.3      | 4.5      | 1.1      | .1       | *        | 1251       | .2       | 15.7      |
| -1                 | .0       | .0       | .1       | 2.9      | 6.0      | 4.3      | 1.0      | *        | *        | 1116       | .2       | 14.0      |
| -2                 | .0       | .0       | .4       | 2.7      | 5.0      | 3.3      | .4       | .1       | .0       | 931        | .2       | 11.7      |
| -3                 | .0       | .0       | .2       | 1.6      | 4.2      | 2.5      | .3       | .0       | .0       | 690        | .1       | 8.7       |
| -4                 | .0       | *        | .5       | 1.6      | 2.4      | 1.3      | .1       | .0       | .0       | 462        | .1       | 5.8       |
| -5                 | .0       | .1       | .4       | 1.0      | 1.6      | .8       | .1       | *        | *        | 303        | .1       | 3.8       |
| -6                 | .0       | *        | .2       | .5       | .8       | .3       | .1       | *        | *        | 138        | *        | 1.7       |
| -7/-8              | .0       | .1       | .3       | .7       | .5       | .2       | .0       | .0       | .0       | 139        | *        | 1.8       |
| -9/-10             | .0       | .1       | .2       | .2       | .2       | *        | .0       | .0       | .0       | 53         | .1       | .6        |
| -11/-13            | .0       | .1       | *        | .1       | .1       | *        | .0       | .0       | .0       | 27         | *        | .3        |
| -14/-16            | *        | *        | *        | .0       | *        | .0       | .0       | .0       | .0       | 8          | .0       | .1        |
| -17/-19            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 1          | .0       | *         |
| TOTAL              | 3        | 31       | 175      | 1564     | 3210     | 2167     | 580      | 91       | 23       | 7844       | 111      | 7733      |
| PCT                | *        | .4       | 2.2      | 19.9     | 40.9     | 27.6     | 7.4      | 1.2      | .3       | 100.0      | 1.4      | 98.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | NE | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|----|------|------|-------|-------|-------|-----|------|
| <1      | .8  | 2.0  | .2    | .0    | .0    | .0  | 3.0  | .5 | 1.8  | .1   | .0    | .0    | .0    | .0  | 2.3  |
| 1-2     | .4  | 6.3  | 2.5   | .0    | .0    | .0  | 9.2  | .3 | 7.6  | 3.7  | .0    | .0    | .0    | .0  | 11.6 |
| 3-4     | *   | 3.3  | 7.3   | .2    | .0    | .0  | 11.0 | *  | 4.4  | 11.2 | .7    | .0    | .0    | .0  | 16.4 |
| 5-6     | .0  | .7   | 5.5   | .5    | *     | .0  | 6.8  | .0 | 1.0  | 8.6  | 1.0   | .1    | .0    | .0  | 10.7 |
| 7       | .0  | .1   | 2.6   | .5    | .0    | .0  | 3.3  | *  | .2   | 4.3  | 1.3   | .0    | .0    | .0  | 5.8  |
| 8-9     | .0  | *    | .7    | .4    | .0    | .0  | 1.2  | .0 | *    | 1.2  | .9    | *     | .0    | .0  | 2.1  |
| 10-11   | .0  | .0   | .4    | .2    | .0    | .0  | .5   | .0 | .0   | .7   | .3    | *     | .0    | .0  | 1.0  |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0 | .0   | .1   | .2    | *     | .0    | .0  | .3   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | *    | *    | *     | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | *    | *     | *     | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.3 | 12.6 | 19.4  | 1.9   | *     | .0  | 35.2 | .8 | 15.1 | 30.0 | 4.5   | .2    | .0    | .0  | 50.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SE | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .3   | .1    | .0    | .0    | .0  | .5  | *  | *   | *    | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .1  | 1.1  | .5    | .0    | .0    | .0  | 1.7 | .0 | .1  | *    | .0    | .0    | .0    | .0  | .1  |
| 3-4     | *   | .6   | 1.2   | .1    | .0    | .0  | 2.0 | .0 | *   | .1   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .2   | 1.0   | .1    | .0    | .0  | 1.3 | .0 | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .3    | .3    | .0    | .0  | .7  | .0 | .0  | *    | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | *     | .1    | .0    | .0  | .1  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 2.2  | 3.3   | .6    | .0    | .0  | 6.4 | *  | .1  | .2   | *     | .0    | .0    | .0  | .3  |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|---------|
| <1      | *   | .1   | *     | .0    | .0    | .0  | .1  | *   | .1   | *     | .0    | .0    | .0  | .1  |         |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |         |
| 3-4     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | *    | *     | .0    | .0    | .0  | *   |         |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .0    | .0    | .0    | .0  | *   |         |
| 7       | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |         |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| TOT PCT | *   | .2   | *     | *     | .0    | .0  | .3  | *   | .2   | .1    | *     | .0    | .0  | .3  |         |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOT PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|---------|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .2  | .1   | *     | .0    | .0    | .0  | .3  |         |
| 1-2     | *   | .3   | *     | .0    | .0    | .0  | .4  | .1  | .6   | .1    | .0    | .0    | .0  | .9  |         |
| 3-4     | .0  | .1   | *     | .0    | .0    | .0  | .1  | .0  | .2   | .2    | .0    | .0    | .0  | .5  |         |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | *   | .0  | .1   | .1    | .0    | .0    | .0  | .2  |         |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .1    | *     | .0    | .0  | .1  |         |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |         |
| TOT PCT | .1  | .6   | .1    | .0    | .0    | .0  | .7  | .3  | 1.1  | .6    | *     | .0    | .0  | 1.9 | 95.7    |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.3 | 4.6  | .5    | .0    | .0    | .0  | 11.3  |         |
| 1-2     | 1.1 | 16.2 | 6.8   | .0    | .0    | .0  | 24.1  |         |
| 3-4     | .1  | 8.8  | 20.1  | 1.1   | .0    | .0  | 30.1  |         |
| 5-6     | .0  | 2.0  | 15.1  | 1.7   | .1    | .0  | 18.8  |         |
| 7       | *   | .4   | 7.4   | 2.1   | .0    | .0  | 9.8   |         |
| 8-9     | .0  | .1   | 2.0   | 1.3   | *     | .0  | 3.4   |         |
| 10-11   | .0  | .0   | 1.1   | .5    | *     | .0  | 1.7   |         |
| 12      | .0  | .0   | .2    | .2    | *     | .0  | .5    |         |
| 13-16   | .0  | *    | *     | *     | .1    | .0  | .2    |         |
| 17-19   | .0  | .0   | *     | .1    | *     | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.5 | 32.0 | 53.2  | 7.0   | .3    | .0  | 100.0 | 4965    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.1 | 9.3  | 12.9 | 7.6  | 3.8  | 1.4 | .4    | .1  | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2205  | 4        |
| 6-7          | *   | 1.1  | 4.8  | 6.8  | 4.9  | 2.4 | 1.8   | .3  | .5    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1329  | 6        |
| 8-9          | .0  | .4   | 1.6  | 3.3  | 3.2  | 1.7 | .8    | .2  | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 680   | 6        |
| 10-11        | .0  | .4   | .5   | .9   | .9   | .7  | .5    | .2  | .2    | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 265   | 7        |
| 12-13        | .0  | .0   | .7   | .6   | .4   | .3  | .1    | *   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 125   | 6        |
| >13          | .0  | .0   | .0   | .3   | .2   | .1  | .1    | *   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 39    | 7        |
| INDRY        | 4.8 | 4.5  | 4.6  | 3.0  | 2.1  | .8  | .4    | .2  | .1    | *     | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1209  | 3        |
| TOTAL        | 403 | 918  | 1472 | 1318 | 904  | 438 | 250   | 98  | 86    | 20    | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 5852  | 5        |
| PCT          | 6.9 | 15.7 | 25.2 | 22.5 | 15.4 | 7.5 | 4.3   | 1.0 | 1.1   | .3    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

TABLE 1

AREA 0006 CAPE BLANC  
20.3N 18.1W

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DKZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | .1   | .1        | .1   | .0        | .0   | .0              | *    | .3              | .1             | .0                      | 4.1         | .1                  | 5.9        | 1.2             | 87.8       |
| NE                 | .1   | .1        | .1   | .0        | .0   | .0              | *    | .4              | .1             | .0                      | 3.1         | *                   | 4.9        | 1.2             | 89.6       |
| E                  | 1.2  | .5        | .3   | .0        | .0   | .0              | .0   | 2.1             | .5             | 1.5                     | 3.4         | .1                  | 6.4        | 1.2             | 85.1       |
| SE                 | 2.5  | 1.9       | .7   | .0        | .0   | .0              | .0   | 5.1             | 1.1            | 1.1                     | 4.0         | .1                  | 6.7        | 3.2             | 78.3       |
| S                  | 1.5  | .4        | .6   | .0        | .0   | .0              | .0   | 2.4             | .8             | 2.4                     | 4.1         | .4                  | 4.0        | .6              | 85.8       |
| SW                 | 1.1  | .6        | .3   | .0        | .0   | .0              | .0   | 2.0             | .5             | .7                      | 7.5         | .1                  | 4.6        | 1.0             | 83.7       |
| W                  | .3   | .8        | .2   | .0        | .0   | .0              | .0   | 1.4             | .7             | 1.1                     | 5.8         | .3                  | 6.6        | 1.0             | 83.1       |
| NW                 | .3   | .2        | .2   | .0        | .0   | .0              | .0   | .6              | .4             | .8                      | 5.3         | .1                  | 5.9        | 1.2             | 85.8       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .1   | *         | .1   | .0        | .0   | .0              | .0   | .2              | .2             | .7                      | 9.8         | .1                  | 4.2        | 1.2             | 83.6       |
| TOT PCT            | .2   | .2        | .1   | .0        | .0   | .0              | *    | .5              | .2             | .7                      | 4.1         | .1                  | 5.7        | 1.3             | 87.6       |
| TOT OBS: 94835     |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)  | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                    |               |
|----------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|--------------------|---------------|
|                | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>GB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG WEA |
| 00003          | .2                 | .2           | .1   | .0           | .0   | .0                    | *    | .5                      | .2                | 1.3          | 3.1            | *                         | 4.6           | 1.3                | 89.0          |
| 06009          | .4                 | .2           | .2   | .0           | .0   | .0                    | .0   | .7                      | .3                | 1.3          | 4.2            | .1                        | 4.2           | 1.0                | 88.3          |
| 12015          | .2                 | .1           | .1   | .0           | .0   | .0                    | *    | .4                      | .2                | *            | 4.1            | .1                        | 6.2           | 1.3                | 87.8          |
| 18021          | .2                 | .1           | .1   | .0           | .0   | .0                    | *    | .4                      | .1                | .3           | 4.9            | .1                        | 7.6           | 1.7                | 85.0          |
| TOT PCT        | .2                 | .2           | .1   | .0           | .0   | .0                    | *    | .5                      | .2                | .7           | 4.1            | .1                        | 5.7           | 1.3                | 87.5          |
| TOT OBS: 96898 |                    |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                    |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |        | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|----|--------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    | 00     |       |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.1                | 12.9 | 23.9  | 4.5   | .1    | *  |        | 42.4  | 13.4         | 46.7        | 51.7        | 41.9       | 33.5  | 38.7  | 50.7  | 46.7  | 40.1  |    |
| NE       | .8                 | 11.5 | 24.1  | 5.0   | .1    | .0 |        | 41.4  | 14.3         | 37.8        | 33.0        | 42.2       | 50.2  | 44.3  | 34.3  | 37.0  | 43.8  |    |
| E        | .3                 | 2.0  | 2.1   | .4    | *     | .0 |        | 4.8   | 11.9         | 3.5         | 2.4         | 4.4        | 7.1   | 6.2   | 4.4   | 4.2   | 5.0   |    |
| SE       | .1                 | .4   | .2    | *     | *     | .0 |        | .8    | 8.8          | .5          | .6          | .7         | 1.0   | 1.1   | 1.2   | .7    | .7    |    |
| S        | .2                 | .5   | .1    | *     | *     | .0 |        | .8    | 8.1          | .7          | .8          | .7         | 1.0   | 1.0   | .8    | .7    | .7    |    |
| SW       | .2                 | .6   | .2    | *     | *     | .0 |        | 1.0   | 7.6          | 1.0         | .9          | 1.0        | .9    | .9    | 1.0   | 1.0   | 1.0   |    |
| W        | .3                 | 1.0  | .2    | *     | *     | .0 |        | 1.6   | 7.1          | 1.7         | 1.3         | 1.5        | 1.4   | 1.4   | 1.6   | 1.7   | 1.7   |    |
| NW       | .5                 | 2.9  | 1.7   | .2    | *     | .0 |        | 5.2   | 9.2          | 5.5         | 6.0         | 5.1        | 4.1   | 4.5   | 5.0   | 5.8   | 5.5   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |        | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 2.0                |      |       |       |       |    |        | 2.0   | .0           | 2.5         | 3.3         | 2.4        | 1.1   | 1.9   | 1.0   | 2.1   | 1.4   |    |
| TOT OBS  |                    |      |       |       |       |    | 178986 |       | 13.1         | 34850       | 2014        | 34879      | 16458 | 36960 | 2211  | 35342 | 16272 |    |
| TOT PCT  | 5.5                | 31.7 | 52.5  | 10.1  | .2    | *  |        | 100.0 |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 5.1                | 22.7 | 13.8  | .8    | *   |           | 42.4     | 13.4     | 47.0       | 39.2  | 39.4  | 44.6  |    |
| NE       | 3.9                | 21.7 | 14.8  | .9    | *   |           | 41.4     | 14.3     | 37.5       | 44.7  | 40.7  | 39.1  |    |
| E        | 1.0                | 2.5  | 1.2   | .1    | *   |           | 4.8      | 11.9     | 3.4        | 5.3   | 6.1   | 4.4   |    |
| SE       | .4                 | .3   | .1    | *     | *   |           | .8       | 8.8      | .5         | .8    | 1.1   | .7    |    |
| S        | .5                 | .3   | .1    | *     | .0  |           | .8       | 8.1      | .8         | .7    | 1.0   | .8    |    |
| SW       | .5                 | .4   | .1    | *     | *   |           | 1.0      | 7.6      | 1.0        | 1.0   | .9    | 1.0   |    |
| W        | .9                 | .6   | .1    | *     | .0  |           | 1.6      | 7.1      | 1.7        | 1.5   | 1.4   | 1.7   |    |
| NW       | 1.7                | 2.8  | .6    | *     | .0  |           | 5.2      | 9.2      | 5.6        | 4.8   | 4.6   | 5.7   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.0                |      |       |       |     |           | 2.0      | .0       | 2.5        | 2.0   | 1.8   | 1.9   |    |
| TOT OBS  |                    |      |       |       |     | 178986    |          | 13.1     | 36864      | 51337 | 39171 | 51614 |    |
| TOT PCT  | 16.1               | 51.4 | 30.6  | 1.9   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|--------------------|------|-------|-------|-------|-----|-------|----------|-----------|
|       |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | 2.5  | 3.2                | 31.6 | 52.5  | 9.9   | .2    | *   | 13.1  | 100.0    | 36864     |
| 06009 | 2.0  | 3.3                | 31.7 | 52.2  | 10.6  | .2    | *   | 13.2  | 100.0    | 51337     |
| 12015 | 1.8  | 3.6                | 30.6 | 53.0  | 10.7  | .3    | .0  | 13.4  | 100.0    | 39171     |
| 18021 | 1.9  | 3.6                | 32.7 | 52.3  | 9.3   | .1    | .0  | 12.9  | 100.0    | 51614     |
| TOT   |      |                    |      |       |       |       |     | 13.1  |          | 178986    |
| PCT   | 2.0  | 3.4                | 31.7 | 52.5  | 10.1  | .2    | *   | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
|          |      |      |      |               |              |                        |
| N        | 34.3 | 5.3  | 7.1  | 4.1           |              | 2.0                    |
| NE       | 21.1 | 4.3  | 5.5  | 2.5           |              | 2.4                    |
| E        | 2.0  | .4   | .6   | .3            |              | 2.7                    |
| SE       | .3   | .1   | .2   | .1            |              | 3.8                    |
| S        | .5   | .1   | .2   | .1            |              | 2.8                    |
| SW       | .5   | .2   | .2   | .1            |              | 3.0                    |
| W        | .7   | .2   | .3   | .3            |              | 3.2                    |
| NW       | 3.2  | .7   | 1.1  | .7            |              | 2.6                    |
| VAR      | .0   | .0   | .0   | .0            |              | .0                     |
| CALM     | 1.9  | .2   | .4   | .2            |              | 1.9                    |
| TOT OBS  |      |      |      |               | 76999        | 2.3                    |
| TOT PCT  | 64.4 | 11.5 | 15.6 | 8.5           | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .2         | *          | .2         | .8         | 1.9          | 1.8          | .8           | .3           | .3           | .9    | 43.6               |              |
| NE      | .1         | *          | .1         | .5         | 1.5          | 1.2          | .7           | .3           | .2           | .5    | 28.2               |              |
| E       | .0         | *          | *          | *          | .1           | .1           | .1           | *            | *            | .1    | 2.7                |              |
| SE      | *          | *          | *          | *          | .1           | *            | *            | *            | *            | *     | .4                 |              |
| S       | *          | *          | *          | *          | *            | .1           | *            | *            | *            | *     | .7                 |              |
| SW      | *          | *          | *          | *          | .1           | *            | *            | *            | *            | *     | .8                 |              |
| W       | .0         | *          | *          | *          | .1           | .1           | *            | *            | *            | *     | 1.2                |              |
| NW      | *          | *          | *          | .2         | .4           | .3           | .1           | *            | .1           | .1    | 4.5                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .1         | *          | *          | *          | .1           | .1           | *            | *            | .1           | *     | 2.3                |              |
| TOT OBS |            |            |            |            |              |              |              |              |              |       | 76999              |              |
| TOT PCT | .4         | .1         | .3         | 1.7        | 4.2          | 3.8          | 1.9          | .7           | .7           | 1.8   | 84.4               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.4         | 2.3        | 2.5        | 2.5        | 2.5          | 2.5          | 2.5           | 2.5        |
| = OR >5000        | 1.9         | 2.9        | 3.2        | 3.2        | 3.2          | 3.2          | 3.2           | 3.2        |
| = OR >3500        | 3.1         | 4.7        | 5.1        | 5.1        | 5.1          | 5.1          | 5.1           | 5.1        |
| = OR >2000        | 5.4         | 8.1        | 8.8        | 8.9        | 8.9          | 8.9          | 8.9           | 8.9        |
| = OR >1000        | 7.9         | 12.1       | 13.0       | 13.1       | 13.1         | 13.1         | 13.1          | 13.1       |
| = OR >600         | 8.8         | 13.6       | 14.7       | 14.8       | 14.8         | 14.8         | 14.8          | 14.8       |
| = OR >300         | 8.9         | 13.8       | 15.0       | 15.1       | 15.1         | 15.1         | 15.1          | 15.1       |
| = OR >150         | 8.9         | 13.9       | 15.0       | 15.1       | 15.1         | 15.2         | 15.2          | 15.2       |
| = OR >0           | 8.9         | 14.0       | 15.3       | 15.4       | 15.4         | 15.5         | 15.6          | 15.6       |

TOTAL NUMBER OF OBS: 78119

PCT FREQ NH <5/8: 84.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBS CD | TOTAL<br>OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|--------|--------------|
| 55.9 | 10.7 | 7.3 | 5.5 | 4.1 | 2.8 | 3.6 | 3.7 | 6.0 | .4     | 81542        |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VsBY<br>(NM) |        | N    | NE   | E   | SE | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | *    | .0   | .0  | *  | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .1   | *    | *   | *  | *   | *   | *   | *   | .0  | *    | *     |              |
|              | TOT %  | .1   | *    | *   | *  | *   | *   | *   | *   | .0  | *    | *     | .2           |
| 1/2<1        | PCP    | *    | .0   | *   | *  | .0  | *   | *   | *   | .0  | .0   | *     |              |
|              | NO PCP | .6   | .4   | .1  | *  | *   | *   | *   | .1  | .0  | *    | 1.3   |              |
|              | TOT %  | .6   | .4   | .1  | *  | *   | *   | *   | .1  | .0  | *    | 1.3   |              |
| 1<2          | PCP    | *    | *    | *   | *  | *   | *   | *   | .0  | .0  | .0   | *     |              |
|              | NO PCP | .6   | .4   | .1  | *  | *   | *   | *   | .1  | .0  | *    | 1.2   |              |
|              | TOT %  | .6   | .4   | .1  | *  | *   | *   | *   | .1  | .0  | *    | 1.2   |              |
| 2<5          | PCP    | *    | *    | *   | *  | *   | *   | *   | .0  | .0  | *    | .1    |              |
|              | NO PCP | 2.5  | 1.1  | .2  | *  | *   | .1  | .1  | .4  | .0  | .2   | 4.6   |              |
|              | TOT %  | 2.5  | 1.1  | .2  | *  | *   | .1  | .1  | .4  | .0  | .2   | 4.6   |              |
| 5<10         | PCP    | .1   | .1   | *   | *  | *   | *   | *   | .0  | .0  | *    | .3    |              |
|              | NO PCP | 15.2 | 8.7  | .9  | .2 | .2  | .3  | .6  | 1.9 | .0  | .6   | 28.6  |              |
|              | TOT %  | 15.3 | 8.8  | .9  | .2 | .3  | .3  | .6  | 2.0 | .0  | .6   | 28.8  |              |
| 10+          | PCP    | *    | *    | *   | *  | *   | *   | *   | .0  | .0  | *    | .1    |              |
|              | NO PCP | 30.9 | 23.3 | 2.1 | .4 | .6  | .6  | .9  | 3.2 | .0  | 1.7  | 63.8  |              |
|              | TOT %  | 31.0 | 23.3 | 2.1 | .4 | .7  | .6  | .9  | 3.2 | .0  | 1.7  | 63.9  |              |
| TOT OBS      |        |      |      |     |    |     |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |     |    |     |     |     |     |     |      |       |              |
|              |        | 50.0 | 33.9 | 3.4 | .7 | 1.0 | 1.0 | 1.7 | 5.8 | .0  | 2.5  | 100.0 | 94656        |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VsBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | *   | *  | *  | *  | *   | *   | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | *   | *  | *  | *  | *   | *   | .0  | *    | .1    |              |
|              | 11-21      | *    | *    | *   | *  | .0 | *  | .0  | *   | .0  | *    | .1    |              |
|              | 22+        | *    | *    | .0  | *  | .0 | .0 | *   | *   | .0  | *    | *     |              |
|              | TOT %      | .1   | *    | *   | *  | *  | *  | *   | *   | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | *    | *    | *   | .0 | *  | *  | *   | *   | .0  | *    | *     |              |
|              | 4-10       | .1   | .1   | *   | *  | *  | *  | *   | *   | .0  | *    | .3    |              |
|              | 11-21      | .3   | .2   | *   | *  | *  | *  | *   | *   | .0  | *    | .5    |              |
|              | 22+        | .1   | *    | *   | *  | .0 | *  | *   | *   | .0  | *    | .1    |              |
|              | TOT %      | .5   | .3   | *   | *  | *  | *  | *   | .1  | .0  | *    | 1.0   |              |
| 1<2          | 0-3        | *    | *    | *   | *  | *  | *  | *   | *   | .0  | *    | .1    |              |
|              | 4-10       | .1   | .1   | *   | *  | *  | *  | *   | *   | .0  | *    | .4    |              |
|              | 11-21      | .3   | .2   | *   | *  | .0 | *  | *   | *   | .0  | *    | .5    |              |
|              | 22+        | .1   | *    | *   | *  | .0 | *  | *   | *   | .0  | *    | .1    |              |
|              | TOT %      | .5   | .4   | .1  | *  | *  | *  | *   | .1  | .0  | *    | 1.1   |              |
| 2<5          | 0-3        | .1   | *    | *   | *  | *  | *  | *   | *   | .0  | .2   | .4    |              |
|              | 4-10       | .6   | .4   | .1  | *  | *  | *  | .1  | .2  | .0  | *    | 1.4   |              |
|              | 11-21      | 1.3  | .7   | .1  | *  | *  | *  | *   | .1  | .0  | *    | 2.2   |              |
|              | 22+        | .3   | .2   | *   | *  | *  | *  | *   | *   | .0  | *    | .5    |              |
|              | TOT %      | 2.3  | 1.3  | .3  | .1 | *  | .1 | .1  | .4  | .0  | .2   | 4.6   |              |
| 5<10         | 0-3        | .3   | .2   | .1  | *  | *  | .1 | .1  | .1  | .0  | .5   | 1.4   |              |
|              | 4-10       | 3.6  | 2.4  | .4  | .1 | .1 | .2 | .3  | .9  | .0  | *    | 8.1   |              |
|              | 11-21      | 8.0  | 5.4  | .4  | *  | *  | *  | .1  | .7  | .0  | *    | 14.6  |              |
|              | 22+        | 1.8  | 1.3  | .1  | *  | *  | *  | *   | .1  | .0  | *    | 3.4   |              |
|              | TOT %      | 13.7 | 9.3  | 1.0 | .2 | .2 | .3 | .5  | 1.8 | .0  | .5   | 27.4  |              |
| 10+          | 0-3        | .8   | .5   | .2  | .1 | .1 | .1 | .2  | .3  | .0  | 1.5  | 3.6   |              |
|              | 4-10       | 9.3  | 7.6  | 1.1 | .2 | .3 | .4 | .6  | 1.8 | .0  | *    | 21.4  |              |
|              | 11-21      | 16.6 | 16.0 | 1.1 | .1 | .1 | .1 | .1  | .9  | .0  | *    | 35.1  |              |
|              | 22+        | 2.6  | 2.8  | .2  | *  | *  | *  | *   | .1  | .0  | *    | 5.7   |              |
|              | TOT %      | 29.2 | 26.9 | 2.6 | .4 | .6 | .6 | .9  | 3.1 | .0  | 1.5  | 65.7  |              |
| TOT OBS      |            |      |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |            |      |      |     |    |    |    |     |     |     |      |       |              |
|              |            | 46.2 | 38.1 | 4.0 | .7 | .9 | .9 | 1.6 | 5.4 | .0  | 2.3  | 100.0 | 130864       |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HR    | 000 | 150 | 300 | 450 | 600  | 750  | 900  | 1050 | 1200 | 1350 | 1500 | 1650 | 1800  | 1950 | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|-------|------|-------|--------------------|--------------|
| (GMT) | 149 | 299 | 599 | 899 | 1199 | 1499 | 1799 | 2099 | 2399 | 2699 | 2999 | 3299 | 3599  | 3899 |       |                    |              |
| 00003 | .4  | *   | .2  | 1.2 | 3.1  | 2.7  | 1.3  | .5   | .5   | 1.4  | 11.3 | 88.7 | 19049 |      |       |                    |              |
| 06009 | .6  | .1  | .5  | 2.3 | 5.7  | 4.4  | 2.0  | .8   | .6   | 1.9  | 18.9 | 81.1 | 18959 |      |       |                    |              |
| 12015 | .4  | .1  | .3  | 1.7 | 4.3  | 4.4  | 2.2  | .8   | .8   | 1.9  | 16.9 | 83.1 | 21828 |      |       |                    |              |
| 18021 | .3  | *   | .2  | 1.4 | 3.5  | 3.2  | 1.9  | .8   | .9   | 1.8  | 13.9 | 86.1 | 20470 |      |       |                    |              |
| TOT   |     |     |     |     |      |      |      |      |      |      |      |      | 80306 |      |       |                    |              |
| PCT   | .4  | .1  | .3  | 1.6 | 4.1  | 3.7  | 1.8  | .7   | .7   | 1.7  | 15.3 | 84.7 | 100.0 |      |       |                    |              |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL  |
|-------|------|-------|-----|-----|------|------|--------|
| (GMT) |      |       |     |     |      |      | OBS    |
| 00003 | .1   | .7    | .7  | 3.9 | 26.2 | 68.3 | 29288  |
| 06009 | .3   | 1.1   | 1.0 | 3.7 | 28.3 | 65.6 | 33696  |
| 12015 | .3   | .8    | 1.1 | 5.8 | 25.2 | 65.8 | 31568  |
| 18021 | .2   | 1.3   | 1.5 | 4.9 | 28.8 | 63.3 | 36418  |
| TOT   |      |       |     |     |      |      | 132970 |
| PCT   | .2   | 1.0   | 1.1 | 4.6 | 27.5 | 65.6 | 100.0  |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HR    | <150  | <600 | <1000 | 1000+  | NH <5/8 | TOTAL |
|-------|-------|------|-------|--------|---------|-------|
| (GMT) | <50YD | <1   | <5    | AND 5+ | AND 5+  | OBS   |
| 00003 | .4    | .7   | 5.6   | 9.2    | 85.2    | 18445 |
| 06009 | .7    | 1.4  | 7.5   | 14.8   | 77.8    | 18370 |
| 12015 | .4    | 1.0  | 8.5   | 13.3   | 78.2    | 21274 |
| 18021 | .3    | .6   | 7.6   | 11.0   | 81.3    | 20030 |
| TOT   |       |      |       |        |         | 78119 |
| PCT   | .4    | .9   | 7.4   | 12.1   | 80.6    | 100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL | PCT   |
|--------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
|        |      |       |       |       |       |       |       |        | OBS   | FREQ  |
| 90/94  | .0   | .0    | .0    | *     | *     | *     | *     | .0     | *     | *     |
| 85/89  | .0   | *     | *     | *     | .1    | .1    | *     | *      | .3    | *     |
| 80/84  | .0   | *     | *     | .1    | .5    | 1.6   | 1.3   | .2     | 3.8   | *     |
| 75/79  | *    | *     | *     | .2    | 1.0   | 4.6   | 5.0   | 1.5    | 12.4  | *     |
| 70/74  | .0   | *     | .1    | .6    | 2.7   | 8.2   | 12.7  | 5.8    | 30.0  | *     |
| 65/69  | .0   | *     | .1    | .8    | 2.9   | 9.4   | 17.9  | 9.5    | 40.7  | *     |
| 60/64  | .0   | .0    | *     | .2    | .8    | 2.8   | 5.4   | 3.5    | 12.7  | *     |
| 55/59  | .0   | .0    | .0    | *     | *     | *     | *     | *      | .1    | *     |
| TOTAL  |      |       |       |       |       |       |       |        | 72308 | 100.0 |
| PCT    | *    | *     | .3    | 2.0   | 8.0   | 26.8  | 42.4  | 20.5   |       |       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW  | W   | NW  | VAR | CALM |
|------|------|-----|----|----|-----|-----|-----|-----|------|
|      |      |     |    |    |     |     |     |     |      |
| *    | *    | .0  | .0 | .0 | .0  | *   | .0  | .0  | .0   |
| .1   | .1   | *   | *  | *  | *   | *   | *   | .0  | *    |
| 1.6  | .9   | .2  | .1 | .1 | .1  | .2  | .4  | .0  | .1   |
| 5.8  | 3.8  | .4  | .1 | .2 | .2  | .4  | 1.3 | .0  | .3   |
| 14.8 | 10.6 | 1.0 | .2 | .3 | .3  | .5  | 1.8 | .0  | .5   |
| 21.0 | 14.4 | 1.4 | .2 | .3 | .4  | .5  | 1.9 | .0  | .7   |
| 6.2  | 5.3  | .4  | .1 | .1 | .1  | .1  | .3  | .0  | .2   |
| *    | *    | *   | *  | .0 | .0  | *   | *   | .0  | *    |
| 49.5 | 35.2 | 3.5 | .7 | .9 | 1.0 | 1.6 | 5.8 | .0  | 1.7  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL  |
|-------|-----|-----|-----|-----|----|----|-----|------|--------|
| (GMT) |     |     |     |     |    |    |     |      | OBS    |
| 00003 | 93  | 76  | 74  | 69  | 64 | 62 | 50  | 68.7 | 37179  |
| 06009 | 94  | 76  | 74  | 69  | 64 | 61 | 50  | 68.7 | 51442  |
| 12015 | 96  | 81  | 78  | 71  | 66 | 63 | 52  | 71.9 | 38594  |
| 18021 | 96  | 81  | 77  | 71  | 65 | 64 | 50  | 71.0 | 50965  |
| TOT   | 96  | 80  | 76  | 70  | 64 | 62 | 50  | 70.0 | 178180 |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL |
|-------|------|-------|-------|-------|-------|--------|------|-------|
| (GMT) |      |       |       |       |       |        |      | OBS   |
| 00003 | .0   | .9    | 4.2   | 19.4  | 46.3  | 29.2   | 84   | 17686 |
| 06009 | .0   | 2.0   | 5.2   | 18.6  | 43.9  | 30.2   | 84   | 18465 |
| 12015 | .0   | 4.1   | 12.8  | 35.9  | 36.9  | 10.2   | 78   | 18671 |
| 18021 | *    | 2.1   | 9.4   | 32.0  | 42.7  | 13.7   | 80   | 18952 |
| TOT   | 1    | 1685  | 5843  | 19618 | 31336 | 15291  | 81   | 73774 |

AD-A031 778 NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/G 4/2  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
NOV 76

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/G 4/2  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
NOV 76

NL

6 OF 7  
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PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0006 CAPE BLANC  
20.3N 18.1W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>52 | 53<br>56 | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | M<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 23/25              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 3     | .0       | *         |
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *   | 9     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *        | *        | .0  | 39    | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | *        | .1       | *        | *        | *        | *   | 166   | *        | .2        |
| 11/13              | .0       | .0       | .0       | *        | *        | .1       | .2       | .1       | *        | *        | *        | *   | 469   | *        | .5        |
| 9/10               | .0       | .0       | .0       | *        | *        | .1       | .3       | .1       | *        | *        | *        | .0  | 782   | .1       | .8        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .6       | .7       | .4       | .1       | *        | *        | .0  | 1641  | .1       | 1.8       |
| 6                  | .0       | .0       | .0       | *        | .2       | .6       | .5       | .2       | *        | *        | *        | .0  | 1359  | .1       | 1.5       |
| 5                  | .0       | .0       | *        | .1       | .6       | 1.3      | 1.0      | .3       | .1       | *        | *        | .0  | 2996  | .2       | 3.3       |
| 4                  | .0       | .0       | *        | .7       | 1.3      | 2.0      | 1.0      | .4       | .2       | *        | *        | .0  | 4383  | .3       | 4.8       |
| 3                  | .0       | .0       | *        | .3       | 2.4      | 2.7      | 1.1      | .3       | .2       | *        | *        | .0  | 6104  | .3       | 6.7       |
| 2                  | .0       | .0       | *        | 1.1      | 4.1      | 3.6      | 1.3      | .5       | .3       | *        | *        | .0  | 9476  | .6       | 10.4      |
| 1                  | .0       | *        | *        | 1.9      | 5.6      | 4.4      | 1.6      | .7       | .4       | *        | *        | .0  | 12613 | .6       | 14.0      |
| 0                  | .0       | .0       | *        | 2.8      | 6.2      | 4.2      | 1.8      | 1.1      | .4       | *        | *        | .0  | 14521 | .7       | 15.9      |
| -1                 | .0       | *        | .1       | 2.3      | 4.5      | 3.1      | 1.8      | 1.0      | .2       | *        | .0       | .0  | 11276 | .5       | 12.5      |
| -2                 | .0       | *        | .1       | 1.6      | 3.0      | 2.0      | 1.4      | .9       | .1       | *        | .0       | .0  | 7904  | .3       | 8.7       |
| -3                 | .0       | .0       | .1       | .9       | 1.7      | 1.3      | 1.1      | .5       | *        | .0       | .0       | .0  | 4874  | .1       | 5.4       |
| -4                 | .0       | *        | .1       | .8       | 1.0      | .9       | .8       | .3       | *        | .0       | .0       | .0  | 3325  | .1       | 3.6       |
| -5                 | .0       | *        | .1       | .5       | .7       | .6       | .5       | .2       | *        | .0       | .0       | .0  | 2253  | .1       | 2.4       |
| -6                 | .0       | *        | *        | .2       | .2       | .3       | .2       | .1       | *        | .0       | .0       | .0  | 924   | *        | 1.0       |
| -7/-8              | .0       | *        | .1       | .3       | .3       | .3       | .2       | *        | *        | .0       | .0       | .0  | 1069  | .1       | 1.1       |
| -9/-10             | .0       | *        | .1       | .1       | .1       | .1       | .1       | *        | .0       | .0       | .0       | .0  | 454   | *        | .5        |
| -11/-13            | *        | *        | *        | .1       | .1       | *        | *        | *        | .0       | .0       | .0       | .0  | 265   | *        | .3        |
| -14/-16            | *        | *        | *        | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0  | 122   | *        | .1        |
| -17/-19            | *        | *        | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 34    | *        | *         |
| -20/-22            | .0       | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 12    | *        | *         |
| -23/-25            | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 3     | .0       | *         |
| TOTAL              |          |          |          |          |          |          |          |          |          |          |          |     | 86876 |          |           |
| PCT                | *        | .1       | .7       | 13.1     | 32.2     | 28.0     | 15.5     | 7.4      | 2.5      | .3       | *        | *   | 100.0 | 4.4      | 95.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | 2.1  | .2    | .0    | .0    | .0  | 2.9  | .2  | 1.0  | .1    | .0    | .0    | .0  | 1.3  |
| 1-2     | .4  | 7.2  | 4.5   | .0    | .0    | .0  | 12.1 | .2  | 4.4  | 2.8   | .0    | .0    | .0  | 7.4  |
| 3-4     | .1  | 4.1  | 11.1  | .8    | .0    | .0  | 16.1 | *   | 2.4  | 6.7   | .5    | .0    | .0  | 9.6  |
| 5-6     | *   | .9   | 9.0   | 1.5   | *     | .0  | 11.3 | *   | .6   | 5.5   | .9    | *     | .0  | 7.0  |
| 7       | *   | .2   | 4.2   | 1.7   | *     | .0  | 6.2  | *   | .1   | 2.6   | 1.0   | *     | .0  | 3.8  |
| 8-9     | .0  | .1   | 1.3   | 1.1   | *     | .0  | 2.5  | *   | *    | .7    | .6    | *     | .0  | 1.3  |
| 10-11   | .0  | *    | .4    | .7    | *     | .0  | 1.1  | .0  | *    | .3    | .4    | *     | .0  | .7   |
| 12      | .0  | *    | .1    | .2    | *     | .0  | .3   | .0  | *    | .1    | .1    | *     | .0  | .2   |
| 13-16   | .0  | *    | *     | .1    | *     | .0  | .2   | .0  | *    | *     | .1    | *     | .0  | .2   |
| 17-19   | .0  | *    | *     | *     | *     | .0  | *    | .0  | .0   | *     | *     | *     | .0  | *    |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | *     | *     | .0    | .0  | *    |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 14.6 | 30.9  | 6.0   | .1    | .0  | 52.7 | .5  | 8.5  | 18.8  | 3.6   | .1    | .0  | 31.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .3  | *   | .1   | *     | .0    | .0    | .0  | .1  |
| 1-2     | *   | .6   | .3    | .0    | .0    | .0  | .9  | *   | .2   | *     | .0    | .0    | .0  | .2  |
| 3-4     | *   | .4   | .4    | *     | .0    | .0  | .8  | *   | .1   | *     | *     | .0    | .0  | .1  |
| 5-6     | .0  | .1   | .3    | *     | .0    | .0  | .4  | *   | *    | *     | *     | *     | .0  | .1  |
| 7       | .0  | .1   | .1    | .1    | *     | .0  | .3  | .0  | .0   | *     | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | *     | *     | *     | .0  | *   | .0  | .0   | *     | *     | *     | .0  | *   |
| 10-11   | .0  | *    | *     | *     | *     | .0  | *   | .0  | .0   | .0    | .0    | *     | *   | *   |
| 12      | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | *    | .0    | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | *     | *     | *     | .0  | *   | .0  | .0   | .0    | .0    | *     | .0  | *   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 1.4  | 1.2   | .1    | *     | .0  | 2.9 | .1  | .3   | .2    | *     | *     | *   | .5  |

PERIOD: (OVER-ALL) 1963-1973

ANNUAL  
TABLE 18 (CONT)AREA 0006 CAPE BLANC  
20.3N 18.1W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     |     | SW   |       |       |       |     |     |  |  | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |  |     |
| <1      | .1  | .1   | *     | .0    | .0    | .0  | .2  | *   | .1   | *     | .0    | .0    | .0  | .2  |  |  |     |
| 1-2     | .1  | .3   | .1    | .0    | .0    | .0  | .4  | .1  | .3   | *     | .0    | .0    | .0  | .4  |  |  |     |
| 3-4     | .0  | .1   | .1    | *     | .0    | .0  | .2  | .0  | .1   | .1    | *     | .0    | .0  | .2  |  |  |     |
| 5-6     | *   | *    | *     | *     | .0    | .0  | .1  | .0  | *    | *     | *     | .0    | .0  | *   |  |  |     |
| 7       | .0  | *    | *     | *     | .0    | .0  | *   | .0  | *    | *     | *     | .0    | .0  | *   |  |  |     |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | *    | *     | *     | .0    | .0  | *   |  |  |     |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |  |  |     |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |  |  |     |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |  |  |     |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |     |
| TOT PCT | .1  | .5   | .2    | *     | *     | .0  | .9  | .1  | .6   | .1    | *     | .0    | .0  | .9  |  |  |     |

| HGT     | W   |      |       |       |       |     |     |     | NW   |       |       |       |     |     |  |  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|--|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |  |           |
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .4  | .2  | .5   | *     | .0    | .0    | .0  | .8  |  |  |           |
| 1-2     | .1  | .5   | .1    | .0    | .0    | .0  | .7  | .1  | 1.7  | .5    | .0    | .0    | .0  | 2.3 |  |  |           |
| 3-4     | *   | .1   | .1    | *     | .0    | .0  | .3  | *   | .7   | .9    | *     | .0    | .0  | 1.6 |  |  |           |
| 5-6     | *   | *    | .1    | *     | .0    | .0  | .1  | *   | .1   | .5    | *     | .0    | .0  | .7  |  |  |           |
| 7       | .0  | *    | *     | *     | .0    | .0  | *   | *   | .2   | .1    | .0    | .0    | .0  | .3  |  |  |           |
| 8-9     | .0  | *    | *     | .0    | .0    | .0  | *   | .0  | *    | .1    | *     | .0    | .0  | .1  |  |  |           |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |  |  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | *     | .0    | .0  | *   |  |  |           |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |  |  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |  |  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |  |  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |  |  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |  |           |
| TOT PCT | .2  | .9   | .2    | *     | .0    | .0  | 1.4 | .4  | 3.0  | 2.2   | .2    | .0    | .0  | 5.7 |  |  | 96.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+     | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|---------|-------|---------|
| <1      | 5.3 | 4.4  | .4    | .0    | .0    | .0      | 10.1  |         |
| 1-2     | 1.2 | 15.1 | 8.2   | .0    | .0    | .0      | 24.4  |         |
| 3-4     | .1  | 7.9  | 19.3  | 1.3   | .0    | .0      | 28.6  |         |
| 5-6     | *   | 1.7  | 15.4  | 2.4   | *     | .0      | 19.6  |         |
| 7       | *   | .5   | 7.2   | 2.8   | *     | .0      | 10.5  |         |
| 8-9     | *   | .1   | 2.1   | 1.8   | *     | .0      | 3.9   |         |
| 10-11   | .0  | *    | .7    | 1.1   | *     | *       | 1.9   |         |
| 12      | .0  | *    | .1    | .3    | *     | .0      | .5    |         |
| 13-16   | .0  | *    | .1    | .2    | *     | .0      | .3    |         |
| 17-19   | .0  | *    | *     | *     | *     | .0      | .1    |         |
| 20-22   | .0  | .0   | *     | *     | .0    | .0      | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0      | .0    |         |
| TOT PCT | 6.7 | 29.7 | 53.4  | 10.0  | .2    | * 100.0 | 52983 |         |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.3 | 7.9  | 11.1 | 7.4  | 4.0  | 1.3 | .5    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 21719 | 4        |
| 6-7          | *   | 1.3  | 5.4  | 7.7  | 5.6  | 2.9 | 1.5   | .5  | .3    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 16147 | 6        |
| 8-9          | *   | .4   | 1.7  | 3.1  | 3.4  | 2.0 | 1.2   | .4  | .3    | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 8096  | 7        |
| 10-11        | .0  | .5   | .7   | .9   | 1.0  | .8  | .5    | .2  | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2970  | 7        |
| 12-13        | .0  | .0   | .7   | .5   | .4   | .3  | .2    | .1  | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1518  | 7        |
| >13          | .0  | .0   | .0   | .3   | .2   | .1  | .1    | .1  | .1    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 578   | 8        |
| INDET        | 3.3 | 3.6  | 4.8  | 3.6  | 2.4  | 1.2 | .7    | .2  | .2    | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 12801 | 4        |
| TOTAL        |     |      |      |      |      |     |       |     |       |       |       |       |       |       |       |       |       |       |     | 63829 | 5        |
| PCT          | 4.7 | 13.9 | 24.3 | 23.4 | 17.1 | 8.6 | 4.8   | 1.6 | 1.3   | .2    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

TABLE 20

AREA 0006 CAPE BLANC  
20.3N 18.1W

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

| SEA TMP<br>DEG F | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   | OCT   | NOV   | DEC   | ANN    | PCT   |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| 96+              | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 95/96            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 93/94            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 91/92            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 1      | *     |
| 89/90            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 2      | *     |
| 87/88            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 16     | *     |
| 85/86            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .3    | .4    | .2    | .0    | .0    | 144    | .1    |
| 83/84            | .0    | .0    | .0    | .0    | .0    | .1    | .3    | 1.3   | 2.4   | 1.1   | .1    | .0    | 728    | .4    |
| 81/82            | .0    | .0    | .0    | .0    | .0    | .1    | 1.6   | 6.9   | 9.7   | 6.1   | 1.0   | .0    | 3001   | 2.1   |
| 79/80            | .1    | .1    | .1    | .0    | .1    | .2    | 4.3   | 10.7  | 12.2  | 10.1  | 2.4   | .1    | 5752   | 3.4   |
| 77/78            | .2    | .1    | .1    | .1    | .1    | .6    | 7.2   | 13.2  | 13.9  | 13.7  | 6.5   | .6    | 8046   | 4.8   |
| 75/76            | .3    | .3    | .2    | .2    | .3    | 1.7   | 10.0  | 14.7  | 13.2  | 15.0  | 11.8  | 2.6   | 10111  | 6.0   |
| 73/74            | 1.4   | .6    | .7    | .7    | 1.4   | 5.6   | 16.7  | 16.7  | 14.4  | 14.8  | 19.2  | 9.1   | 14569  | 8.6   |
| 71/72            | 6.3   | 2.8   | 3.4   | 3.1   | 5.8   | 13.9  | 17.3  | 13.4  | 12.5  | 11.9  | 16.7  | 14.8  | 17388  | 10.3  |
| 69/70            | 14.6  | 8.8   | 11.0  | 11.7  | 16.5  | 20.6  | 15.8  | 11.4  | 11.9  | 12.1  | 14.1  | 18.5  | 23578  | 13.9  |
| 67/68            | 25.4  | 23.0  | 23.6  | 23.5  | 23.6  | 22.6  | 13.5  | 8.7   | 7.6   | 10.5  | 13.3  | 19.0  | 30012  | 17.7  |
| 65/66            | 24.8  | 27.3  | 27.3  | 25.0  | 22.9  | 17.2  | 9.3   | 2.3   | 1.6   | 3.4   | 8.8   | 15.0  | 25767  | 15.2  |
| 63/64            | 19.2  | 25.4  | 23.8  | 25.4  | 21.5  | 14.3  | 3.7   | .5    | .1    | .9    | 4.9   | 14.9  | 21531  | 12.7  |
| 61/62            | 6.4   | 9.7   | 8.1   | 8.8   | 6.9   | 2.7   | .3    | .0    | .0    | .1    | .8    | 4.7   | 6750   | 4.0   |
| 59/60            | 1.1   | 1.8   | 1.5   | 1.3   | .7    | .2    | .1    | .0    | .0    | .0    | .2    | .5    | 1025   | .6    |
| 57/58            | .1    | .2    | .1    | .1    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .1    | 120    | .1    |
| 55/56            | .1    | .0    | .0    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 34     | *     |
| 53/54            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 9      | *     |
| 51/52            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 3      | *     |
| 49/50            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 1      | *     |
| 47/48            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 45/46            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 43/44            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 41/42            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 39/40            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 37/38            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 35/36            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 33/34            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 31/32            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 29/30            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| 27/28            | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| <27              | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0      | .0    |
| TOTAL            | 12026 | 13165 | 14589 | 14508 | 14247 | 13879 | 14398 | 14444 | 13423 | 14566 | 15092 | 14851 | 169188 | 100.0 |
| MEAN             | 66.4  | 65.5  | 65.8  | 65.7  | 66.4  | 67.9  | 71.4  | 74.2  | 74.8  | 73.8  | 71.2  | 68.0  | 69.2   |       |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000  | 0300 | 0600  | 0900 | 1200  | 1500 | 1800  | 2100 | MEAN | TOTAL<br>OBS |
|-----|-------|------|-------|------|-------|------|-------|------|------|--------------|
| JAN | 1017  | 1016 | 1016  | 1018 | 1018  | 1015 | 1016  | 1017 | 1017 | 8581         |
| FEB | 1016  | 1015 | 1015  | 1017 | 1017  | 1015 | 1015  | 1017 | 1016 | 9366         |
| MAR | 1016  | 1015 | 1015  | 1016 | 1016  | 1015 | 1014  | 1015 | 1015 | 10389        |
| APR | 1015  | 1014 | 1014  | 1016 | 1016  | 1014 | 1014  | 1015 | 1015 | 10269        |
| MAY | 1015  | 1014 | 1014  | 1016 | 1016  | 1014 | 1014  | 1015 | 1015 | 10057        |
| JUN | 1015  | 1014 | 1015  | 1016 | 1016  | 1015 | 1014  | 1015 | 1015 | 9887         |
| JUL | 1014  | 1013 | 1013  | 1015 | 1015  | 1013 | 1013  | 1014 | 1014 | 10390        |
| AUG | 1013  | 1012 | 1012  | 1013 | 1014  | 1012 | 1012  | 1013 | 1013 | 10524        |
| SEP | 1014  | 1013 | 1013  | 1014 | 1015  | 1013 | 1013  | 1014 | 1014 | 9967         |
| OCT | 1015  | 1014 | 1014  | 1015 | 1016  | 1014 | 1014  | 1015 | 1015 | 10506        |
| NOV | 1016  | 1014 | 1015  | 1016 | 1016  | 1014 | 1015  | 1015 | 1015 | 10500        |
| DEC | 1017  | 1016 | 1016  | 1017 | 1018  | 1016 | 1016  | 1017 | 1017 | 10618        |
| ANN | 1015  | 1014 | 1014  | 1016 | 1016  | 1014 | 1014  | 1015 | 1015 | 120954       |
| OBS | 25162 | 2069 | 25041 | 6869 | 27177 | 2232 | 25704 | 6700 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 1001 | 1009 | 1011 | 1015 | 1017 | 1019 | 1023 | 1025 | 1035 |
| FEB | 1000 | 1009 | 1011 | 1014 | 1016 | 1018 | 1022 | 1024 | 1036 |
| MAR | 996  | 1008 | 1011 | 1013 | 1015 | 1017 | 1020 | 1022 | 1037 |
| APR | 1000 | 1007 | 1011 | 1013 | 1015 | 1017 | 1020 | 1022 | 1028 |
| MAY | 1000 | 1009 | 1011 | 1013 | 1015 | 1016 | 1019 | 1021 | 1028 |
| JUN | 1003 | 1009 | 1011 | 1013 | 1015 | 1017 | 1019 | 1021 | 1027 |
| JUL | 998  | 1007 | 1010 | 1012 | 1014 | 1016 | 1018 | 1020 | 1026 |
| AUG | 1000 | 1007 | 1009 | 1011 | 1013 | 1015 | 1017 | 1019 | 1026 |
| SEP | 999  | 1008 | 1010 | 1012 | 1014 | 1016 | 1018 | 1022 | 1028 |
| OCT | 996  | 1008 | 1011 | 1013 | 1015 | 1016 | 1020 | 1024 | 1031 |
| NOV | 998  | 1009 | 1011 | 1013 | 1015 | 1017 | 1020 | 1025 | 1033 |
| DEC | 996  | 1009 | 1012 | 1015 | 1017 | 1019 | 1022 | 1025 | 1033 |



PERIOD: (PRIMARY) 1911-1973  
(OVER-ALL) 1856-1973

JANUARY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHR FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | .0   | .3        | .3   | .0        | .0   | .0             | .0   | .6              | .4             | .0                      | 4.2         | .0                  | 3.1        | 2.1             | 89.5       |
| NE                 | .6   | .4        | .2   | .0        | .0   | .0             | .1   | 1.3             | .2             | .3                      | 3.6         | .0                  | 2.3        | 1.1             | 91.3       |
| E                  | .3   | .0        | .0   | .0        | .0   | .0             | .3   | .6              | 2.4            | .9                      | 3.8         | .0                  | 2.8        | .9              | 88.8       |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |
| S                  | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |
| W                  | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |
| NW                 | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | 9.4        | .0              | 90.6       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0             | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |
| TOT PCT            | .5   | .3        | .2   | .0        | .0   | .0             | .1   | 1.0             | .5             | .3                      | 3.5         | .0                  | 2.6        | 1.2             | 91.0       |
| TOT OBS:           | 1254 |           |      |           |      |                |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DKZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003         | .3                 | .3           | 1.0  | .0           | .0   | .0                    | .0   | 1.6                     | .7                | .7           | 3.6            | .0                        | 1.3           | 1.0                             | 91.5             |
| 06009         | .9                 | .3           | .0   | .0           | .0   | .0                    | .0   | 1.2                     | .9                | .3           | 3.2            | .0                        | 2.1           | .6                              | 91.7             |
| 12015         | .4                 | .0           | .0   | .0           | .0   | .0                    | .0   | .4                      | .4                | .0           | 2.5            | .0                        | 3.5           | 1.8                             | 91.5             |
| 18021         | .3                 | .6           | .0   | .0           | .0   | .0                    | .3   | 1.1                     | .0                | .3           | 4.2            | .0                        | 3.4           | 1.4                             | 89.5             |
| TOT PCT       | .5                 | .3           | .2   | .0           | .0   | .0                    | .1   | 1.1                     | .5                | .3           | 3.4            | .0                        | 2.6           | 1.2                             | 91.0             |
| TOT OBS:      | 1280               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|-------|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    |      |           |          |          | 06         | 09    | 12    | 15    | 18    | 21    |       |
| N        | .4                 | 3.7  | 4.9   | .7    | *     | .0 |       | 9.8  | 12.3      |          | 12.5     | 7.3        | 9.4   | 8.9   | 13.8  | 7.6   | 11.1  | 7.9   |
| NE       | 1.2                | 16.8 | 40.2  | 8.4   | .2    | .0 |       | 66.8 | 14.6      |          | 71.4     | 63.7       | 66.0  | 66.3  | 72.0  | 63.8  | 66.6  | 66.0  |
| E        | .4                 | 5.3  | 9.9   | 3.6   | .1    | .0 |       | 19.2 | 14.8      |          | 11.9     | 23.8       | 19.5  | 21.5  | 10.5  | 24.9  | 18.4  | 21.6  |
| SE       | .1                 | .6   | .5    | .2    | *     | .0 |       | 1.4  | 12.1      |          | .9       | 2.1        | 1.3   | 1.2   | .5    | 1.8   | 1.3   | 1.8   |
| S        | *                  | .2   | .1    | *     | .0    | .0 |       | .3   | 9.4       |          | .2       | .3         | .5    | .3    | .3    | .2    | .3    | .2    |
| SW       | *                  | .2   | .0    | .0    | .0    | .0 |       | .3   | 6.1       |          | .1       | .8         | .3    | .0    | .4    | .0    | .1    | .4    |
| W        | .1                 | .3   | .1    | .0    | .0    | .0 |       | .5   | 5.8       |          | .5       | .3         | .5    | .5    | .6    | .5    | .5    | .5    |
| NW       | .2                 | .7   | .2    | *     | .0    | .0 |       | 1.1  | 8.0       |          | 2.0      | 1.1        | .9    | .7    | 1.1   | .8    | 1.3   | 1.0   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0   | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .7                 |      |       |       |       |    |       | .7   | .0        |          | .5       | .6         | 1.6   | .5    | .7    | .5    | .5    | .8    |
| TOT OBS  | 154                | 1344 | 2693  | 611   | 16    | 0  | 4818  |      | 14.1      |          | 443      | 486        | 892   | 580   | 439   | 440   | 880   | 658   |
| TOT PCT  | 3.2                | 27.9 | 55.9  | 12.7  | .3    | .0 | 100.0 |      |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 1.7                | 5.8  | 2.2   | .1    | .0  |           | 9.8      | 12.3     | 9.8        | 9.2   | 10.7  | 9.7   |    |
| NE       | 5.8                | 33.8 | 25.1  | 2.0   | .0  |           | 66.8     | 14.6     | 67.4       | 66.1  | 67.9  | 66.4  |    |
| E        | 2.0                | 9.0  | 7.4   | .9    | .0  |           | 19.2     | 14.8     | 18.1       | 20.2  | 17.7  | 19.7  |    |
| SE       | .3                 | .8   | .2    | .1    | .0  |           | 1.4      | 12.1     | 1.5        | 1.3   | 1.2   | 1.5   |    |
| S        | .1                 | .1   | *     | *     | .0  |           | .3       | 9.4      | .3         | .4    | .3    | .2    |    |
| SW       | .2                 | .1   | .0    | .0    | .0  |           | .3       | 6.1      | .5         | .2    | .2    | .2    |    |
| W        | .4                 | .1   | *     | .0    | .0  |           | .5       | 5.8      | .4         | .5    | .5    | .5    |    |
| NW       | .5                 | .6   | *     | .0    | .0  |           | 1.1      | 8.0      | 1.5        | .8    | 1.0   | 1.2   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | .7                 |      |       |       |     |           | .7       | .0       | .5         | 1.2   | .6    | .6    |    |
| TOT OBS  | 558                | 2425 | 1486  | 149   | 0   | 4818      |          | 14.1     | 929        | 1472  | 879   | 1538  |    |
| TOT PCT  | 11.6               | 50.3 | 30.0  | 3.1   | .0  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1911-1973  
(OVER-ALL) 1856-1973

JANUARY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND | 0000 | 0300 | 0600 | 0900 | 1200 | 1500 | 1800 | 2100  | 2400  | MEAN | PCT FREQ | TOTAL OBS |
|------|------|------|------|------|------|------|------|-------|-------|------|----------|-----------|
| 0000 | 0.5  | 2.2  | 30.0 | 54.5 | 12.6 | .2   | .0   | 13.8  | 100.0 |      |          | 929       |
| 0600 | 1.2  | 2.2  | 29.9 | 53.5 | 13.0 | .3   | .0   | 13.9  | 100.0 |      |          | 1472      |
| 1200 | .6   | 2.5  | 23.1 | 59.0 | 12.3 | .5   | .0   | 14.4  | 100.0 |      |          | 879       |
| 1800 | .6   | 2.8  | 26.3 | 57.3 | 12.7 | .4   | .0   | 14.3  | 100.0 |      |          | 1538      |
| TOT  | 36   | 118  | 1344 | 2693 | 611  | 16   | 0    | 14.1  |       |      |          | 4818      |
| PCT  | .7   | 2.4  | 27.9 | 55.9 | 12.7 | .3   | .0   | 100.0 |       |      |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-------|-----------|------------------|
| N        | 6.4  | 1.9  | 3.4  | 1.6   |           | 3.2              |
| NE       | 36.6 | 11.5 | 17.2 | 6.0   |           | 3.0              |
| E        | 4.7  | 2.5  | 2.9  | 1.0   |           | 3.3              |
| SE       | .4   | .2   | .0   | .2    |           | 3.1              |
| S        | .0   | .0   | .0   | .0    |           | 5.0              |
| SW       | .0   | .1   | .0   | .1    |           | 5.0              |
| W        | .2   | .2   | .0   | .0    |           | 3.4              |
| NW       | .4   | .4   | .5   | .1    |           | 3.9              |
| VAR      | .0   | .0   | .0   | .0    |           | .0               |
| CALM     | .4   | .1   | .2   | .4    |           | 4.7              |
| TOT OBS  | 417  | 144  | 208  | 80    | 849       | 3.1              |
| TOT PCT  | 49.1 | 17.0 | 24.5 | 9.4   | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM) >4/8  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 | OBS   |
| .0  | .0  | .0  | .4  | .6   | .6   | .3   | .1   | .2   | .2    | 11.0            |       |
| .0  | .1  | .0  | 1.6 | 4.6  | 3.5  | 2.0  | .7   | .7   | .8    | 57.4            |       |
| .0  | .0  | .0  | .3  | .6   | .9   | .2   | .3   | .0   | .0    | 8.7             |       |
| .0  | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .0    | .5              |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |       |
| .0  | .0  | .0  | .0  | .1   | .0   | .0   | .0   | .0   | .0    | .1              |       |
| .0  | .0  | .0  | .0  | .1   | .0   | .0   | .0   | .0   | .0    | .5              |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |       |
| .0  | .0  | .0  | .1  | .1   | .0   | .0   | .0   | .1   | .0    | .7              |       |
| .0  | 1   | 0   | 21  | 54   | 44   | 21   | 10   | 9    | 8     | 681             | 849   |
| .0  | .1  | .0  | 2.5 | 6.4  | 5.2  | 2.5  | 1.2  | 1.1  | .9    | 80.2            | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|---------|-----------|-----------|------------|---------|
| = OR >6500     | 1.6      | 1.7     | 2.0     | 2.0     | 2.0       | 2.0       | 2.0        | 2.0     |
| = OR >5000     | 2.7      | 2.9     | 3.1     | 3.1     | 3.1       | 3.1       | 3.1        | 3.1     |
| = OR >3500     | 4.4      | 5.3     | 5.6     | 5.6     | 5.6       | 5.6       | 5.6        | 5.6     |
| = OR >2000     | 8.5      | 10.4    | 10.8    | 10.8    | 10.8      | 10.8      | 10.8       | 10.8    |
| = OR >1000     | 14.0     | 16.6    | 16.9    | 16.9    | 16.9      | 16.9      | 16.9       | 16.9    |
| = OR >600      | 16.6     | 19.3    | 19.6    | 19.6    | 19.6      | 19.6      | 19.6       | 19.6    |
| = OR >300      | 16.6     | 19.3    | 19.6    | 19.6    | 19.6      | 19.6      | 19.6       | 19.6    |
| = OR >150      | 16.7     | 19.4    | 19.7    | 19.7    | 19.7      | 19.7      | 19.7       | 19.7    |
| = OR >0        | 16.7     | 19.4    | 19.7    | 19.7    | 19.7      | 19.7      | 19.7       | 19.7    |
| TOTAL          | 144      | 167     | 170     | 170     | 170       | 170       | 170        | 170     |

TOTAL NUMBER OF OBS: 862

PCT FREQ NH <5/8: 80.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL OBS |
|------|------|------|------|-----|-----|-----|-----|-----|-----|-----------|
| 33.3 | 13.9 | 14.7 | 10.2 | 7.7 | 4.9 | 7.0 | 3.0 | 5.4 | .0  | 901       |



PERIOD: (PRIMARY) 1911-1973  
(OVER-ALL) 1896-1973

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15.5N 23.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | TOT %  | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .5   | 2.4  | .6   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 3.4          |
|              | TOT %  | .5   | 2.4  | .6   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 3.4          |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .4   | .2   | .0  | .0 | .0 | .0 | .1  | .0  | .0   | .0    | .6           |
|              | TOT %  | .0   | .4   | .2   | .0  | .0 | .0 | .0 | .1  | .0  | .0   | .0    | .6           |
| 2<5          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .7   | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .9           |
|              | TOT %  | .0   | .7   | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .9           |
| 5<10         | PCP    | .1   | .6   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .8           |
|              | NO PCP | 3.3  | 17.0 | 4.9  | .4  | *  | .0 | .2 | .6  | .0  | .2   | .2    | 26.6         |
|              | TOT %  | 3.3  | 17.7 | 5.0  | .4  | *  | .0 | .2 | .6  | .0  | .2   | .2    | 27.4         |
| 10+          | PCP    | .0   | .2   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .2           |
|              | NO PCP | 9.5  | 48.2 | 6.8  | .7  | .0 | .3 | .4 | 1.0 | .0  | .5   | .5    | 67.4         |
|              | TOT %  | 9.5  | 48.5 | 6.8  | .7  | .0 | .3 | .4 | 1.0 | .0  | .5   | .5    | 67.7         |
| TOT OBS      |        |      |      |      |     |    |    |    |     |     |      |       | 1252         |
| TOT PCT      |        | 13.3 | 69.6 | 12.7 | 1.2 | *  | .3 | .6 | 1.7 | .0  | .6   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .1   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .1    | .1           |
|              | 11-21      | .1   | .8   | .3   | *   | .0 | .0 | .0 | .0  | .0  | .0   | 1.2   | 1.2          |
|              | 22+        | .1   | .4   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .5    | .5           |
|              | TOT %      | .3   | 1.3  | .3   | *   | .0 | .0 | .0 | .0  | .0  | .0   | 1.9   | 1.9          |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .1   | .0   | .0  | .0 | .0 | .0 | .1  | .0  | .0   | .2    | .2           |
|              | 11-21      | *    | .3   | .1   | .0  | .0 | .0 | .0 | *   | .0  | .0   | .4    | .4           |
|              | 22+        | *    | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .2    | .2           |
|              | TOT %      | .1   | .5   | .2   | .0  | .0 | .0 | .0 | .1  | .0  | .0   | .9    | .9           |
| 2<5          | 0-3        | .0   | *    | .0   | .0  | .0 | .0 | *  | .0  | .0  | *    | .1    | .1           |
|              | 4-10       | .1   | .7   | .2   | *   | *  | .1 | .0 | .0  | .0  | .0   | 1.1   | 1.1          |
|              | 11-21      | .2   | 2.2  | .3   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | 2.8   | 2.8          |
|              | 22+        | .0   | .5   | .2   | .0  | .0 | .0 | .0 | *   | .0  | *    | .7    | .7           |
|              | TOT %      | .3   | 3.5  | .7   | *   | *  | .1 | *  | *   | .0  | *    | 4.8   | 4.8          |
| 5<10         | 0-3        | .1   | .1   | *    | .1  | .0 | .0 | .0 | .0  | .0  | .1   | .5    | .5           |
|              | 4-10       | .9   | 4.6  | 1.4  | .2  | *  | *  | .1 | .3  | .0  | .1   | 7.5   | 7.5          |
|              | 11-21      | 1.5  | 10.3 | 2.6  | .4  | *  | .0 | .0 | .1  | .0  | .0   | 14.9  | 14.9         |
|              | 22+        | .3   | 2.1  | .6   | *   | .0 | .0 | .0 | .0  | .0  | .0   | 3.0   | 3.0          |
|              | TOT %      | 2.9  | 17.1 | 4.6  | .7  | .1 | *  | .1 | .4  | .0  | .1   | 25.9  | 25.9         |
| 10+          | 0-3        | .3   | .7   | .2   | *   | *  | .1 | .1 | .2  | .0  | .5   | 2.1   | 2.1          |
|              | 4-10       | 3.6  | 12.2 | 2.7  | .5  | .1 | .1 | .2 | .6  | .0  | .0   | 20.0  | 20.0         |
|              | 11-21      | 4.4  | 28.8 | 4.5  | .1  | .1 | .0 | *  | .2  | .0  | .0   | 38.2  | 38.2         |
|              | 22+        | .4   | 5.0  | .8   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | 6.2   | 6.2          |
|              | TOT %      | 8.6  | 46.8 | 8.3  | .6  | .2 | .2 | .4 | 1.0 | .0  | .5   | 66.6  | 66.6         |
| TOT OBS      |            |      |      |      |     |    |    |    |     |     |      |       | 2568         |
| TOT PCT      |            | 12.1 | 69.2 | 14.1 | 1.3 | .3 | .3 | .5 | 1.5 | .0  | .7   | 100.0 |              |



PERIOD: (PRIMARY) 1911-1973  
(OVER-ALL) 1856-1973

# JANUARY

AREA 0007 CAPE VERDE ISLANDS  
19.3N 29.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .0         | .0         | 1.3        | 5.8          | 3.5          | 3.5          | 1.3          | .9           | .4    | 16.8  | 83.2               | 226          |
| 06009          | .0         | .5         | .0         | 4.1        | 7.3          | 5.5          | 2.7          | 1.8          | 1.4          | .5    | 29.7  | 76.3               | 219          |
| 12015          | .0         | .0         | .0         | 1.4        | 5.4          | 5.9          | 2.3          | .0           | .5           | 1.4   | 16.7  | 83.3               | 221          |
| 18021          | .0         | .0         | .0         | 3.6        | 5.8          | 5.4          | .9           | 1.3          | 1.3          | 1.8   | 20.1  | 79.9               | 224          |
| TOT            | 0          | 1          | 0          | 23         | 54           | 65           | 21           | 10           | 9            | 172   | 718   | 890                |              |
| PCT            | .0         | .1         | .0         | 2.6        | 6.1          | 5.1          | 2.4          | 1.1          | 1.0          | 1.0   | 19.3  | 80.7               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 1.6   | .5  | 4.3 | 23.2 | 70.4 | 564          |
| 06009          | .0   | 1.8   | 1.0 | 3.4 | 27.3 | 66.5 | 732          |
| 12015          | .0   | 1.8   | .6  | 5.3 | 19.9 | 72.5 | 513          |
| 18021          | .0   | 2.3   | 1.1 | 5.9 | 30.7 | 60.0 | 785          |
| TOT            | 0    | 49    | 22  | 122 | 674  | 1727 | 2594         |
| PCT            | .0   | 1.9   | .8  | 4.7 | 26.0 | 66.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500D | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0            | .0         | 1.4         | 16.1            | 82.6              | 218          |
| 06009          | .0            | .5         | 5.1         | 19.2            | 75.7              | 214          |
| 12015          | .0            | .0         | 2.8         | 15.3            | 81.9              | 215          |
| 18021          | .0            | .0         | 5.6         | 15.8            | 78.6              | 215          |
| TOT            | 0             | 1          | 32          | 143             | 687               | 862          |
| PCT            | .0            | .1         | 3.7         | 16.6            | 79.7              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .0    | .1    | .0    | .0    | .0     | 1            | .1          |
| 80/84  | .0   | .0    | .0    | .2    | .2    | .2    | .1    | .0     | 7            | .8          |
| 75/79  | .0   | .0    | .0    | .1    | 3.1   | 7.4   | 2.1   | 1.0    | 120          | 13.7        |
| 70/74  | .0   | .0    | .0    | 1.0   | 15.9  | 29.5  | 20.3  | 4.6    | 626          | 71.3        |
| 65/69  | .0   | .0    | .0    | .8    | 3.1   | 4.2   | 5.1   | .9     | 124          | 14.1        |
| TOTAL  | 0    | 0     | 0     | 19    | 197   | 363   | 242   | 57     | 878          | 100.0       |
| PCT    | .0   | .0    | .0    | 2.2   | 22.4  | 41.3  | 27.6  | 6.5    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|------|----|----|----|----|-----|-----|------|
| .0   | .1   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| .1   | .7   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 2.3  | 9.1  | 1.7  | .0 | .0 | .0 | .2 | .3  | .0  | .1   |
| 9.4  | 52.3 | 6.7  | .7 | .0 | .2 | .3 | 1.4 | .0  | .2   |
| 1.4  | 9.9  | 2.2  | .2 | .0 | .0 | .1 | .0  | .0  | .3   |
| 13.1 | 72.1 | 10.7 | .9 | .0 | .3 | .6 | 1.7 | .0  | .7   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 78  | 75  | 74  | 71  | 67 | 65 | 59  | 70.7 | 922          |
| 06009          | 82  | 76  | 74  | 71  | 67 | 65 | 64  | 70.6 | 1453         |
| 12015          | 88  | 81  | 78  | 73  | 69 | 68 | 58  | 73.6 | 831          |
| 18021          | 88  | 81  | 77  | 72  | 68 | 67 | 59  | 72.5 | 1482         |
| TOT            | 88  | 79  | 77  | 72  | 68 | 66 | 58  | 71.7 | 4688         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.3   | 17.5  | 36.0  | 38.6  | 6.6    | 78   | 228          |
| 06009          | .0   | 2.1   | 14.9  | 34.0  | 38.7  | 10.2   | 78   | 235          |
| 12015          | .0   | 1.4   | 31.6  | 46.5  | 16.3  | 4.2    | 73   | 215          |
| 18021          | .0   | 4.1   | 24.7  | 48.9  | 17.8  | 4.6    | 74   | 219          |
| TOT            | 0    | 20    | 197   | 369   | 253   | 58     | 76   | 897          |

PERIOD: (PRIMARY) 1911-1973  
(OVER-ALL) 1856-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | M<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | 1     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .0       | .0       | .2       | .0       | 2     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .0       | .0       | .2       | .0       | .0       | 2     | .0       | .2        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .1       | .1       | .0       | 4     | .0       | .4        |
| 6                  | .0       | .0       | .0       | .2       | .1       | .1       | .0       | .0       | 4     | .0       | .4        |
| 5                  | .0       | .0       | .0       | .0       | .3       | .3       | .3       | .0       | 9     | .1       | .7        |
| 4                  | .0       | .0       | .0       | .3       | .8       | .5       | .1       | .0       | 19    | .2       | 1.5       |
| 3                  | .0       | .0       | .0       | .4       | 2.5      | .4       | .0       | .0       | 37    | .0       | 3.2       |
| 2                  | .0       | .0       | .0       | .8       | 2.3      | .4       | .1       | .0       | 41    | .1       | 3.5       |
| 1                  | .0       | .0       | .2       | 2.3      | 4.6      | .8       | .0       | .0       | 90    | .1       | 7.8       |
| 0                  | .0       | .0       | .3       | 7.9      | 6.4      | .2       | .0       | .0       | 168   | .3       | 14.5      |
| -1                 | .0       | .0       | 1.2      | 12.0     | 7.4      | .0       | .0       | .0       | 235   | .4       | 20.2      |
| -2                 | .1       | .0       | .9       | 14.0     | 4.3      | .1       | .0       | .0       | 221   | .7       | 18.7      |
| -3                 | .0       | .0       | 1.8      | 10.0     | 2.5      | .1       | .0       | .0       | 163   | 1.0      | 13.3      |
| -4                 | .0       | .0       | .9       | 5.7      | 1.0      | .0       | .0       | .0       | 86    | .3       | 7.3       |
| -5                 | .0       | .0       | .4       | 2.0      | .6       | .0       | .0       | .0       | 34    | .1       | 2.9       |
| -6                 | .0       | .0       | .3       | 1.1      | .2       | .0       | .0       | .0       | 18    | .0       | 1.6       |
| -7/-8              | .0       | .0       | .0       | .3       | .3       | .0       | .0       | .0       | 6     | .0       | .5        |
| TOTAL              | 1        | 66       | 649      | 379      | 36       | 1        | 1        | 1140     | 36    | 1104     |           |
| PCT                | .1       | .0       | 5.8      | 56.9     | 33.2     | 3.2      | .7       | .1       | 100.0 | 3.2      | 96.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .8   | .2    | .0    | .0    | .0  | .9   | .6  | 1.0  | .5    | .0    | .0    | .0  | 2.0  |
| 1-2     | .0  | 3.2  | .7    | .0    | .0    | .0  | 3.9  | .0  | 8.8  | 4.6   | .0    | .0    | .0  | 13.4 |
| 3-4     | .0  | 2.2  | 1.9   | .0    | .0    | .0  | 4.2  | .2  | 6.7  | 16.2  | 1.2   | .0    | .0  | 24.4 |
| 5-6     | .0  | .3   | 2.8   | .2    | .0    | .0  | 3.3  | .0  | 1.2  | 11.9  | 3.2   | .0    | .0  | 16.3 |
| 7       | .0  | .0   | 1.0   | .2    | .0    | .0  | 1.1  | .0  | .0   | 7.4   | 4.1   | .0    | .0  | 11.5 |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | 2.7   | 1.6   | .0    | .0  | 4.3  |
| 10-11   | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | .0   | .5    | .7    | .0    | .0  | 1.1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .0  | 6.5  | 6.7   | .4    | .0    | .0  | 13.6 | .8  | 17.7 | 43.9  | 11.0  | .0    | .0  | 73.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .5   | .0    | .0    | .0    | .0  | .7  | .3  | .2   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .0  | 1.3  | .2    | .0    | .0    | .0  | 1.4 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .0   | 3.1   | .0    | .0    | .0  | 3.1 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .5   | 1.0   | .5    | .0    | .0  | 2.0 | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .8    | .5    | .0    | .0  | 1.2 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .2    | .2    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 2.3  | 5.3   | 1.1   | .0    | .0  | 8.9 | .3  | .3   | .0    | .0    | .0    | .0  | .5  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)AREA 0007 CAPE VERDE ISLANDS  
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PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0        |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .1        |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .2  | .5   | .0    | .0    | .0    | .0  | .7  | .7        |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .5   | .2    | .0    | .0    | .0  | .7  | .7        |
| 3-4     | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .0  | .2   | .4    | .0    | .0    | .0  | .6  | .6        |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .2  | 1.1  | .6    | .0    | .0    | .0  | 1.9 | 98.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.8 | 3.2  | .6    | .0    | .0    | .0  | 6.7   |         |
| 1-2     | .0  | 13.8 | 5.7   | .0    | .0    | .0  | 19.5  |         |
| 3-4     | .2  | 9.3  | 21.5  | 1.2   | .0    | .0  | 32.3  |         |
| 5-6     | .0  | 2.0  | 15.6  | 3.9   | .0    | .0  | 21.5  |         |
| 7       | .0  | .0   | 9.1   | 4.7   | .0    | .0  | 13.8  |         |
| 8-9     | .0  | .0   | 2.8   | 1.6   | .0    | .0  | 4.5   |         |
| 10-11   | .0  | .0   | .8    | .8    | .0    | .0  | 1.6   |         |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 3.0 | 28.4 | 56.2  | 12.4  | .0    | .0  | 100.0 | 493     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 3.0 | 7.1 | 10.4 | 7.2  | 3.3  | .7  | .6    | .7  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 227   | 4        |
| 6-7          | .1  | 1.1 | 6.5  | 8.4  | 6.7  | 2.8 | 1.4   | .7  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 199   | 6        |
| 8-9          | .0  | .4  | 2.3  | 4.4  | 4.4  | 2.1 | 1.7   | .9  | 1.0   | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 121   | 7        |
| 10-11        | .0  | .3  | 1.1  | .6   | 1.7  | 1.4 | .6    | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 43    | 7        |
| 12-13        | .0  | .0  | 1.3  | .9   | .3   | .1  | .0    | .0  | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 22    | 6        |
| >13          | .0  | .0  | .0   | .9   | .6   | .0  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10    | 6        |
| INDET        | .7  | .7  | 3.3  | 1.6  | 4.0  | 1.0 | .3    | .7  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 82    | 5        |
| TOTAL        | 27  | 68  | 175  | 168  | 147  | 58  | 32    | 13  | 15    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 704   | 5        |
| PCT          | 3.8 | 9.7 | 24.9 | 23.9 | 20.9 | 8.2 | 4.5   | 1.8 | 2.1   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1912-1973  
(OVER-ALL) 1855-1973

# FEBRUARY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.8W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG MU PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG MEA |  |
| N                  | .3   | .4        | .5   | .0        | .0   | .0              | .0   | 1.1             | .4             | .0                      | 4.9         | .0                  | 2.3        | 1.3                  | 89.9       |  |
| NE                 | .3   | .1        | .2   | .0        | .0   | .0              | .0   | .6              | .1             | .8                      | 4.8         | .0                  | 4.5        | .4                   | 88.9       |  |
| E                  | 2.2  | 1.2       | .0   | .0        | .0   | .0              | .0   | 3.3             | .0             | 1.2                     | 21.2        | .0                  | .8         | .6                   | 72.9       |  |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 13.8        | .0                  | .0         | .0                   | 86.2       |  |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | 15.8       | .0                   | 84.2       |  |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 11.8        | .0                  | 9.9        | .0                   | 82.4       |  |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 50.0        | .0                  | .0         | .0                   | 50.0       |  |
| NW                 | .0   | 1.5       | .0   | .0        | .0   | .0              | .0   | 1.5             | .0             | .0                      | 15.0        | .0                  | 1.5        | .8                   | 81.2       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | 100.0      |  |
| TOT PCT            | .5   | .3        | .2   | .0        | .0   | .0              | .0   | 1.0             | .2             | .6                      | 6.8         | .0                  | 3.6        | .6                   | 87.2       |  |
| TOT OBS:           | 1260 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |  |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| PRECIPITATION TYPE |      |              |      |              |      |                      |      |                    |                   | OTHER WEATHER PHENOMENA |                   |                           |               |                       |              |                  |
|--------------------|------|--------------|------|--------------|------|----------------------|------|--------------------|-------------------|-------------------------|-------------------|---------------------------|---------------|-----------------------|--------------|------------------|
| HOUR<br>(GMT)      | RAIN | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHR<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR | THDR<br>LTNG            | FGG<br>WU<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 06003              | .3   | .0           | .0   | .0           | .0   | .0                   | .0   | .3                 | .3                | 1.0                     | 4.6               | .0                        | 1.6           | .7                    | 91.5         |                  |
| 06009              | 1.1  | .3           | .3   | .0           | .0   | .0                   | .0   | 1.7                | .3                | 1.1                     | 9.6               | .0                        | 2.5           | .3                    | 84.8         |                  |
| 12015              | .0   | 1.0          | .0   | .0           | .0   | .0                   | .0   | 1.0                | .3                | .3                      | 5.1               | .0                        | 4.8           | .7                    | 87.7         |                  |
| 18021              | .3   | .0           | .6   | .0           | .0   | .0                   | .0   | .9                 | .0                | .0                      | 7.7               | .0                        | 5.6           | 1.5                   | 84.3         |                  |
| TOT PCT            | .5   | .3           | .2   | .0           | .0   | .0                   | .0   | 1.0                | .2                | .6                      | 6.9               | .0                        | 3.6           | .8                    | 86.9         |                  |
| TOT OBS:           | 1279 |              |      |              |      |                      |      |                    |                   |                         |                   |                           |               |                       |              |                  |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.1                | 7.3  | 7.9   | 1.2   | *     | .0  | 17.6      | 11.8     |          | 20.7       | 11.1  | 16.1  | 16.1  | 27.4  | 14.5  | 19.9  | 15.7  |
| NE       | 1.1                | 18.1 | 35.5  | 8.2   | *     | .0  | 63.3      | 14.3     |          | 67.9       | 61.5  | 63.9  | 61.9  | 63.0  | 62.1  | 63.4  | 62.4  |
| E        | .5                 | 4.3  | 7.2   | 2.3   | .2    | *   | 14.4      | 14.5     |          | 6.8        | 22.4  | 15.3  | 16.3  | 6.2   | 18.0  | 12.1  | 17.2  |
| SE       | .1                 | .5   | .2    | .1    | *     | .0  | .9        | 11.7     |          | .8         | 1.8   | .8    | 1.2   | .0    | 1.4   | .6    | 1.1   |
| S        | .1                 | .2   | *     | *     | .0    | .0  | .4        | 6.9      |          | .8         | .4    | .3    | .3    | .5    | .4    | .2    | .2    |
| SW       | .1                 | .1   | *     | *     | .0    | .0  | .3        | 6.5      |          | .3         | .2    | .3    | .3    | .2    | .0    | .5    | .1    |
| W        | .2                 | .1   | *     | .0    | .0    | .0  | .3        | 4.1      |          | .0         | .2    | .2    | .3    | .4    | .4    | .5    | .3    |
| NW       | .3                 | 1.2  | .3    | .1    | .0    | .0  | 1.9       | 8.1      |          | 2.3        | 1.1   | 1.9   | 2.2   | 2.0   | 2.2   | 1.8   | 2.1   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |       |     | 1.0       | .0       |          | .4         | 1.3   | 1.2   | 1.4   | .2    | .9    | 1.0   | .8    |
| TOT OBS  | 213                | 1498 | 2419  | 568   | 26    | 3   | 4727      | 13.5     |          | 465        | 472   | 891   | 587   | 449   | 424   | 827   | 612   |
| TOT PCT  | 4.5                | 31.7 | 51.2  | 12.0  | .6    | .1  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 09    | 15    |
| N        | 3.6                | 9.7  | 4.0   | .2    | .0  | 17.6      | 11.8     |          | 15.8       | 16.1  | 21.2  | 18.1  |
| NE       | 6.0                | 35.7 | 21.4  | 2.1   | .1  | 63.3      | 14.3     |          | 64.7       | 63.1  | 62.6  | 63.0  |
| E        | 2.1                | 6.5  | 5.0   | .8    | *   | 14.4      | 14.5     |          | 14.7       | 15.7  | 11.9  | 14.3  |
| SE       | .3                 | .4   | .2    | *     | .0  | .9        | 11.7     |          | 1.3        | .9    | .7    | .8    |
| S        | .2                 | .1   | *     | .0    | .0  | .4        | 6.9      |          | .6         | .3    | .4    | .2    |
| SW       | .1                 | .1   | *     | .0    | .0  | .3        | 6.5      |          | .3         | .3    | .1    | .3    |
| W        | .2                 | .1   | .0    | .0    | .0  | .3        | 4.1      |          | .1         | .3    | .4    | .5    |
| NW       | 1.0                | .7   | .2    | .0    | .0  | 1.9       | 8.1      |          | 1.7        | 2.0   | 2.1   | 1.9   |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |     | 1.0       | .0       |          | .9         | 1.3   | .6    | .9    |
| TOT OBS  | 689                | 2423 | 1461  | 149   | 5   | 4727      | 13.5     |          | 937        | 1478  | 873   | 1439  |
| TOT PCT  | 14.6               | 51.3 | 30.9  | 3.2   | .1  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1912-1973  
(OVER-ALL) 1855-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003 | .9   | 3.3 | 35.8 | 50.3  | 9.6   | .2    | .0  | 13.0 | 100.0    | 937       |
| 06009 | 1.3  | 3.5 | 34.4 | 50.1  | 10.1  | .7    | .0  | 13.1 | 100.0    | 1478      |
| 12015 | .6   | 4.4 | 27.9 | 51.5  | 14.9  | .6    | .1  | 14.1 | 100.0    | 873       |
| 18021 | .9   | 3.3 | 28.6 | 52.7  | 13.8  | .6    | .1  | 14.1 | 100.0    | 1439      |
| TOT   | 45   | 168 | 1498 | 2419  | 568   | 26    | 3   | 13.5 |          | 4727      |
| PCT   | 1.0  | 3.6 | 31.7 | 51.2  | 12.0  | .6    | .1  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 12.6 | 3.7  | 5.3  | 2.3          |              | 3.0                    |
| NE       | 31.8 | 14.8 | 15.1 | 5.3          |              | 3.1                    |
| E        | 1.8  | 1.8  | 1.8  | .1           |              | 3.4                    |
| SE       | .2   | .1   | .0   | .1           |              | 3.6                    |
| S        | .2   | .0   | .1   | .0           |              | 2.3                    |
| SW       | .2   | .0   | .1   | .1           |              | 3.5                    |
| W        | .0   | .0   | .0   | .0           |              | .0                     |
| NW       | 1.2  | .5   | .3   | .1           |              | 2.7                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .2   | .0   | .0   | .0           |              | .0                     |
| TOT OBS  | 418  | 181  | 196  | 70           | 865          | 3.1                    |
| TOT PCT  | 48.3 | 20.9 | 22.7 | 8.1          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .0         | .0         | .8         | 2.4          | 1.1          | .3           | .2           | .1           | .1    | 18.9               |              |
| NE      | .0         | .1         | .0         | 2.5        | 3.7          | 3.3          | 1.6          | .3           | .5           | .3    | 54.6               |              |
| E       | .0         | .0         | .0         | .4         | .4           | .5           | .0           | .0           | .0           | .0    | 4.4                |              |
| SE      | .0         | .0         | .0         | .0         | .0           | .1           | .0           | .0           | .0           | .0    | .3                 |              |
| S       | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .1           | .0    | .2                 |              |
| SW      | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .1           | .0    | .2                 |              |
| W       | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| NW      | .0         | .0         | .0         | .0         | .1           | .1           | .0           | .0           | .0           | .0    | 2.1                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .2                 |              |
| TOT OBS | 0          | 1          | 0          | 32         | 57           | 43           | 17           | 4            | 8            | 3     | 700                | 865          |
| TOT PCT | .0         | .1         | .0         | 3.7        | 6.6          | 5.0          | 2.0          | .5           | .9           | .3    | 80.9               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | # OR<br>>10 | # OR<br>>5 | # OR<br>>2 | VSBY (NM)<br># OR<br>>1 | # OR<br>>1/2 | # OR<br>>1/4 | # OR<br>>50YD | # OR<br>>0 |
|-------------------|-------------|------------|------------|-------------------------|--------------|--------------|---------------|------------|
| # OR >6500        | .7          | 1.1        | 1.3        | 1.3                     | 1.3          | 1.3          | 1.3           | 1.3        |
| # OR >5000        | 1.1         | 1.7        | 1.8        | 1.8                     | 1.8          | 1.8          | 1.8           | 1.8        |
| # OR >3500        | 3.0         | 3.7        | 3.8        | 3.8                     | 3.8          | 3.8          | 3.8           | 3.8        |
| # OR >2000        | 7.7         | 8.6        | 8.7        | 8.7                     | 8.7          | 8.7          | 8.7           | 8.7        |
| # OR >1000        | 13.7        | 15.3       | 15.6       | 15.6                    | 15.6         | 15.6         | 15.6          | 15.6       |
| # OR >600         | 16.5        | 18.9       | 19.2       | 19.2                    | 19.2         | 19.2         | 19.2          | 19.2       |
| # OR >300         | 16.5        | 18.9       | 19.2       | 19.2                    | 19.2         | 19.2         | 19.2          | 19.2       |
| # OR >150         | 16.5        | 18.9       | 19.3       | 19.3                    | 19.3         | 19.3         | 19.3          | 19.3       |
| # OR >0           | 16.5        | 18.9       | 19.3       | 19.3                    | 19.3         | 19.3         | 19.3          | 19.3       |
| TOTAL             | 144         | 165        | 169        | 169                     | 169          | 169          | 169           | 169        |

TOTAL NUMBER OF OBS: 874

PCT FREQ NH <5/8: 80.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|-----|-------|--------------|
| 29.7 | 16.4 | 12.8 | 12.8 | 8.4 | 4.5 | 5.6 | 4.6 | 5.1 | .0    | 925          |

PERIOD: (PRIMARY) 1912-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.8W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | NO PCP | .1   | .0   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .1   | .1           |
|              | TOT %  | .1   | .0   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .1   | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | NO PCP | .9   | 2.9  | 2.1 | .1 | .0 | *  | *  | .4  | .0  | .0   | 6.4  | 6.4          |
|              | TOT %  | .9   | 2.9  | 2.1 | .1 | .0 | *  | *  | .4  | .0  | .0   | 6.4  | 6.4          |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | NO PCP | .1   | 1.5  | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.7  | 1.7          |
|              | TOT %  | .1   | 1.5  | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.7  | 1.7          |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | NO PCP | .2   | .7   | .2  | .0 | .0 | .1 | .0 | .1  | .0  | .0   | 1.3  | 1.3          |
|              | TOT %  | .2   | .7   | .2  | .0 | .0 | .1 | .0 | .1  | .0  | .0   | 1.3  | 1.3          |
| 5<10         | PCP    | .2   | .2   | .3  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .6   | .6           |
|              | NO PCP | 5.0  | 13.8 | 3.3 | .1 | .2 | *  | .0 | .6  | .0  | .0   | 23.0 | 23.0         |
|              | TOT %  | 5.1  | 14.0 | 3.6 | .1 | .2 | *  | .0 | .6  | .0  | .0   | 23.7 | 23.7         |
| 10+          | PCP    | .1   | .2   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .4   | .4           |
|              | NO PCP | 15.9 | 44.0 | 4.2 | .4 | .2 | .2 | *  | 1.5 | .0  | .2   | 66.6 | 66.6         |
|              | TOT %  | 16.0 | 44.2 | 4.2 | .4 | .2 | .2 | *  | 1.5 | .0  | .2   | 67.0 | 67.0         |
| TOT OBS      |        |      |      |     |    |    |    |    |     |     |      |      | 1259         |
| TOT PCT      |        |      |      |     |    |    |    |    |     |     |      |      | 100.0        |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .1   | .1           |
|              | 11-21      | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | TOT %      | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .1   | .1           |
| 1/2<1        | 0-3        | .1   | *    | .0  | *  | .0 | *  | *  | *   | .0  | .0   | .2   | .2           |
|              | 4-10       | .3   | .6   | .2  | .0 | .0 | .0 | .0 | .1  | .0  | .0   | 1.3  | 1.3          |
|              | 11-21      | .1   | .8   | .7  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.6  | 1.6          |
|              | 22+        | .0   | .0   | .1  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .1   | .1           |
|              | TOT %      | .4   | 1.4  | 1.0 | *  | .0 | *  | *  | .2  | .0  | .0   | 3.1  | 3.1          |
| 1<2          | 0-3        | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | .1   | .1           |
|              | 4-10       | *    | .2   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .2   | .2           |
|              | 11-21      | .1   | .6   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | .8   | .8           |
|              | 22+        | *    | .2   | .0  | .0 | .0 | .0 | .0 | .1  | .0  | .0   | .3   | .3           |
|              | TOT %      | .1   | 1.1  | *   | .0 | .0 | .0 | .0 | .2  | .0  | *    | 1.4  | 1.4          |
| 2<5          | 0-3        | .0   | *    | .0  | .0 | *  | .0 | .0 | .0  | .0  | .1   | .2   | .2           |
|              | 4-10       | .2   | .6   | .1  | *  | .0 | *  | .0 | .1  | .0  | .0   | 1.1  | 1.1          |
|              | 11-21      | .1   | .8   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .9   | .9           |
|              | 22+        | *    | .3   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3   | .3           |
|              | TOT %      | .3   | 1.7  | .2  | *  | *  | *  | .0 | .1  | .0  | .1   | 2.6  | 2.6          |
| 5<10         | 0-3        | .4   | .3   | .2  | .0 | *  | .0 | *  | .1  | .0  | .2   | 1.3  | 1.3          |
|              | 4-10       | 1.9  | 4.3  | 1.0 | *  | .1 | *  | *  | .3  | .0  | .0   | 7.6  | 7.6          |
|              | 11-21      | 2.3  | 8.1  | 2.0 | *  | .0 | .0 | .0 | .1  | .0  | .0   | 12.5 | 12.5         |
|              | 22+        | .5   | 2.5  | .4  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 3.4  | 3.4          |
|              | TOT %      | 5.0  | 15.1 | 3.6 | .1 | .1 | *  | .1 | .6  | .0  | .2   | 24.8 | 24.8         |
| 10+          | 0-3        | 1.0  | .7   | .3  | .1 | .1 | .1 | .2 | .3  | .0  | .5   | 3.3  | 3.3          |
|              | 4-10       | 6.9  | 14.5 | 2.6 | .3 | .2 | .1 | *  | 1.0 | .0  | .0   | 25.7 | 25.7         |
|              | 11-21      | 6.8  | 24.0 | 2.6 | *  | .0 | .0 | *  | .3  | .0  | .0   | 33.7 | 33.7         |
|              | 22+        | .8   | 3.9  | .4  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 5.2  | 5.2          |
|              | TOT %      | 15.5 | 43.2 | 6.0 | .3 | .3 | .3 | .2 | 1.6 | .0  | .5   | 67.9 | 67.9         |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |      | 2674         |
| TOT PCT      |            |      |      |     |    |    |    |    |     |     |      |      | 100.0        |



PERIOD: (PRIMARY) 1912-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.8W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1499 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .0         | .0         | 2.2        | 6.1          | 3.9          | 1.3          | .0           | .9           | .4    | 14.8  | 85.2               | 230          |
| 06009          | .0         | .0         | .0         | 4.6        | 4.6          | 5.5          | 1.8          | 1.4          | 1.4          | .0    | 19.2  | 80.8               | 219          |
| 12015          | .0         | .0         | .0         | 4.6        | 7.1          | 5.5          | 2.5          | .4           | .8           | .4    | 21.4  | 78.6               | 238          |
| 18021          | .0         | .4         | .0         | 2.7        | 8.5          | 4.0          | 1.8          | .4           | .4           | .4    | 18.8  | 81.2               | 223          |
| TOT            | 0          | 1          | 0          | 32         | 60           | 63           | 17           | 5            | 8            | 3     | 169   | 741                | 910          |
| PCT            | .0         | .1         | .0         | 3.5        | 6.6          | 4.7          | 1.9          | .5           | .9           | .3    | 18.6  | 81.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 2.6   | 1.1 | 1.1 | 24.4 | 70.9 | 570          |
| 06009          | .0   | 4.1   | 1.3 | 2.8 | 28.3 | 63.6 | 799          |
| 12015          | .2   | 2.2   | 1.3 | 3.6 | 20.7 | 72.1 | 556          |
| 18021          | .1   | 3.4   | 2.0 | 2.9 | 24.9 | 66.8 | 768          |
| TOT            | 2    | 86    | 38  | 70  | 671  | 1826 | 2693         |
| PCT            | .1   | 3.2   | 1.4 | 2.6 | 24.9 | 67.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0            | .0         | 2.7         | 12.7            | 84.6              | 221          |
| 06009          | .0            | .0         | 5.7         | 14.6            | 79.7              | 212          |
| 12015          | .0            | .0         | 7.5         | 17.7            | 74.8              | 226          |
| 18021          | .0            | .5         | 5.1         | 16.3            | 78.6              | 215          |
| TOT            | 0             | 1          | 46          | 134             | 694               | 874          |
| PCT            | .0            | .1         | 5.3         | 15.3            | 79.4              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .2    | .0    | .0    | .2    | .1    | .0     | 5            | .5          |
| 75/79  | .0   | .0    | .0    | .3    | 2.4   | 4.1   | 1.5   | .5     | 82           | 8.8         |
| 70/74  | .0   | .0    | .0    | .7    | 9.9   | 23.1  | 22.8  | 5.2    | 577          | 61.8        |
| 65/69  | .0   | .0    | .0    | .1    | 4.0   | 12.4  | 9.5   | 2.9    | 270          | 28.9        |
| TOTAL  | 0    | 0     | 2     | 11    | 151   | 372   | 317   | 81     | 934          | 100.0       |
| PCT    | .0   | .0    | .2    | 1.2   | 16.2  | 39.8  | 33.9  | 8.7    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|-------|------|------|-----|----|----|----|----|-----|-----|------|
| 80/84 | .2   | .3   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 75/79 | 2.8  | 5.4  | .1  | .0 | .1 | *  | .0 | .3  | .0  | .1   |
| 70/74 | 16.2 | 39.8 | 3.0 | .5 | .2 | .2 | .0 | 1.7 | .0  | .1   |
| 65/69 | 4.7  | 21.0 | 2.9 | .1 | .0 | .0 | .0 | .3  | .0  | .0   |
| TOTAL | 23.8 | 66.6 | 6.0 | .5 | .3 | .2 | .0 | 2.3 | .0  | .2   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 79  | 75  | 73  | 69  | 66 | 64 | 60  | 69.5 | 932          |
| 06009          | 79  | 75  | 73  | 69  | 66 | 64 | 63  | 69.5 | 1466         |
| 12015          | 84  | 81  | 78  | 72  | 69 | 67 | 64  | 72.7 | 821          |
| 18021          | 84  | 80  | 77  | 71  | 68 | 66 | 64  | 71.6 | 1388         |
| TOT            | 84  | 79  | 76  | 70  | 67 | 65 | 60  | 70.7 | 4607         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .4    | 10.5  | 35.9  | 41.4  | 11.8   | 79   | 237          |
| 06009          | .0   | 1.2   | 12.2  | 34.1  | 41.9  | 10.6   | 79   | 246          |
| 12015          | .0   | 1.3   | 25.7  | 43.0  | 24.9  | 5.1    | 75   | 237          |
| 18021          | .0   | 2.6   | 16.7  | 48.0  | 26.0  | 6.6    | 76   | 227          |
| TOT            | 0    | 13    | 154   | 380   | 319   | 81     | 77   | 947          |

## FEBRUARY

PERIOD: (PRIMARY) 1912-1973  
(OVER-ALL) 1855-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 29.8W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | 1     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .3       | .1       | .2       | 6     | .0       | .5        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .2       | 4     | .0       | .3        |
| 6                  | .0       | .0       | .0       | .4       | .2       | .0       | 7     | .1       | .5        |
| 5                  | .0       | .0       | .0       | .1       | .7       | .0       | 9     | .0       | .8        |
| 4                  | .0       | .0       | .6       | 1.0      | .4       | .2       | 26    | .3       | 1.9       |
| 3                  | .0       | .2       | .4       | 1.7      | .7       | .0       | 35    | .3       | 2.7       |
| 2                  | .0       | .0       | 1.7      | 2.9      | .5       | .0       | 60    | .3       | 4.7       |
| 1                  | .0       | .1       | 4.3      | 5.2      | .3       | .0       | 118   | 1.0      | 8.9       |
| 0                  | .0       | 1.2      | 11.3     | 4.1      | .0       | .1       | 198   | 1.7      | 15.0      |
| -1                 | .0       | 2.3      | 12.5     | 2.7      | .1       | .0       | 208   | 1.7      | 15.8      |
| -2                 | .0       | 3.4      | 12.1     | 2.4      | .0       | .0       | 212   | .9       | 16.9      |
| -3                 | .0       | 2.9      | 7.8      | .7       | .0       | .0       | 135   | .5       | 10.9      |
| -4                 | .0       | 2.1      | 4.6      | .4       | .0       | .0       | 85    | .3       | 6.9       |
| -5                 | .0       | 1.1      | 2.2      | .3       | .0       | .0       | 42    | .0       | 3.5       |
| -6                 | .0       | .8       | .5       | .2       | .0       | .0       | 17    | .1       | 1.3       |
| -7/-8              | .0       | .5       | .9       | .0       | .0       | .0       | 17    | .1       | 1.3       |
| -9/-10             | .1       | .2       | .2       | .0       | .0       | .0       | 5     | .0       | .4        |
| -11/-13            | .0       | .3       | .0       | .0       | .0       | .0       | 3     | .0       | .3        |
| TOTAL              | 1        |          | 702      |          | 37       |          |       | 85       | 1103      |
| PCT                |          | 176      |          | 264      |          | 8        | 1188  |          |           |
|                    | .1       | 14.8     | 59.1     | 22.2     | 3.1      | .7       | 100.0 | 7.2      | 92.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | .7   | .0    | .0    | .0    | .0  | 1.3  | .2  | 1.0  | .0    | .0    | .0    | .0  | 1.2  |
| 1-2     | .4  | 5.4  | 2.5   | .0    | .0    | .0  | 8.4  | .0  | 8.2  | 7.5   | .0    | .0    | .0  | 15.6 |
| 3-4     | .0  | 2.3  | 6.1   | .6    | .0    | .0  | 9.0  | .0  | 5.7  | 15.9  | .8    | .0    | .0  | 22.4 |
| 5-6     | .0  | .8   | 4.3   | .4    | .0    | .0  | 5.4  | .0  | .4   | 9.4   | 2.3   | .0    | .0  | 12.1 |
| 7       | .0  | .2   | 3.1   | .6    | .0    | .0  | 3.9  | .0  | .5   | 6.8   | 2.0   | .0    | .0  | 9.2  |
| 8-9     | .0  | .0   | .5    | .5    | .0    | .0  | 1.1  | .0  | .0   | .7    | 1.2   | .0    | .0  | 1.9  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .2    | .8    | .0    | .0  | 1.1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 9.3  | 16.5  | 2.2   | .0    | .0  | 29.1 | .2  | 15.8 | 40.5  | 7.1   | .0    | .0  | 63.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | .8   | .0    | .0    | .0    | .0  | 1.2 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 1.2  | .2    | .0    | .0    | .0  | 1.3 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .2   | 1.0   | .0    | .0    | .0  | 1.1 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .7    | .2    | .0    | .0  | .8  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 2.1  | 1.8   | .5    | .0    | .0  | 4.8 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .6   | .0    | .0    | .0    | .0  | .6  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |           |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .7   | .2    | .0    | .0    | .0  | .9  |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .2   | .5    | .0    | .0    | .0  | .7  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .3    | .0    | .0    | .0  | .3  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | 1.0  | 1.0   | .0    | .0    | .0  | 2.0 | 100.0     |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT DBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.3 | 2.7  | .0    | .0    | .0    | .0  | 4.0   |         |
| 1-2     | 1.0 | 15.9 | 10.3  | .0    | .0    | .0  | 27.3  |         |
| 3-4     | .0  | 8.2  | 23.3  | 1.5   | .0    | .0  | 32.9  |         |
| 5-6     | .0  | 1.3  | 13.8  | 2.9   | .0    | .0  | 18.0  |         |
| 7       | .0  | .6   | 10.5  | 2.7   | .0    | .0  | 13.8  |         |
| 8-9     | .0  | .0   | 1.3   | 1.7   | .0    | .0  | 2.9   |         |
| 10-11   | .0  | .0   | .2    | .8    | .0    | .0  | 1.0   |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.3 | 28.7 | 59.3  | 9.6   | .0    | .0  | 100.0 | 477     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 3.0 | 6.6  | 10.9 | 7.0  | 4.6  | 1.1 | 1.3   | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 243   | 4        |
| 6-7          | .0  | .3   | 5.9  | 10.7 | 7.4  | 2.6 | 1.3   | .6  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 202   | 6        |
| 8-9          | .0  | .7   | 2.3  | 3.9  | 3.7  | .9  | 1.4   | .6  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 98    | 6        |
| 10-11        | .0  | .4   | .9   | 1.3  | .9   | 1.1 | .1    | .0  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 34    | 6        |
| 12-13        | .0  | .0   | 1.3  | .6   | 1.0  | .4  | .0    | .0  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 24    | 6        |
| >13          | .0  | .0   | .0   | .7   | .3   | .0  | .3    | .1  | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 13    | 9        |
| INDET        | .0  | 2.4  | 3.9  | 2.7  | 2.1  | .3  | .6    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 84    | 4        |
| TOTAL        | 21  | 73   | 175  | 188  | 140  | 45  | 35    | 10  | 10    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 698   | 5        |
| PCT          | 3.0 | 10.5 | 25.1 | 26.9 | 20.1 | 6.4 | 5.0   | 1.4 | 1.4   | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

# MARCH

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TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WND DIR  | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                      |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|----------------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGD WD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N        | .2                 | .0        | .3   | .0        | .0   | .0              | .0   | .6                      | .0             | .6        | 3.7         | .0                  | 4.4        | .2                   | 90.7       |
| NE       | .0                 | .0        | *    | .0        | .0   | .0              | .0   | *                       | .2             | .2        | 5.4         | .0                  | 3.4        | .4                   | 90.4       |
| E        | .0                 | 1.0       | .0   | .0        | .0   | .0              | .0   | 1.0                     | .0             | .5        | 4.6         | .0                  | 1.9        | .0                   | 92.0       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 2.1         | .0                  | .0         | .0                   | 97.9       |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                   | 100.0      |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                   | 100.0      |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 16.7        | .0                  | .0         | .0                   | 83.3       |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .9         | .0                   | 99.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                   | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                   | 100.0      |
| TOT PCT  | .1                 | .1        | .1   | .0        | .0   | .0              | .0   | .2                      | .1             | .3        | 4.8         | .0                  | 3.4        | .3                   | 90.8       |
| TOT OBS: | 1626               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                      |            |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|----------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FGG WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 0000          | .0                 | .0           | .3   | .0           | .0   | .0                    | .0   | .3                 | .3                      | .5           | 3.2            | .0                        | 3.2           | .5                                    | 91.9             |
| 0600          | .2                 | .2           | .2   | .0           | .0   | .0                    | .0   | .7                 | .0                      | .5           | 6.0            | .0                        | 3.0           | .2                                    | 89.8             |
| 1200          | .0                 | .0           | .0   | .0           | .0   | .0                    | .0   | .0                 | .3                      | .0           | 3.8            | .0                        | 2.8           | .3                                    | 92.8             |
| 1800          | .0                 | .0           | .0   | .0           | .0   | .0                    | .0   | .0                 | .0                      | .2           | 5.9            | .0                        | 4.4           | .2                                    | 89.3             |
| TOT PCT       | .1                 | .1           | .1   | .0           | .0   | .0                    | .0   | .2                 | .1                      | .3           | 4.8            | .0                        | 3.4           | .3                                    | 90.9             |
| TOT OBS:      | 1651               |              |      |              |      |                       |      |                    |                         |              |                |                           |               |                                       |                  |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |       |
| N        | .7                 | 8.1  | 12.9  | 1.8   | *     | .0 |      | 23.5  | 12.9         |             | 29.7        | 14.4       | 24.0  | 24.7  | 32.0  | 20.1  | 23.8  | 20.4  |
| NE       | .9                 | 17.7 | 36.8  | 7.2   | .4    | *  |      | 63.1  | 14.2         |             | 62.3        | 65.9       | 61.8  | 61.6  | 60.4  | 64.3  | 64.1  | 64.4  |
| E        | .4                 | 2.9  | 5.0   | 1.1   | .1    | .0 |      | 9.5   | 14.0         |             | 5.3         | 15.5       | 10.2  | 9.8   | 3.8   | 11.2  | 7.9   | 11.6  |
| SE       | .1                 | .4   | .2    | *     | .0    | .0 |      | .7    | 9.0          |             | .3          | 1.8        | .6    | .5    | .7    | .8    | .6    | .6    |
| S        | .1                 | .1   | *     | .0    | .0    | .0 |      | .3    | 5.8          |             | .0          | .3         | .3    | .5    | .1    | .5    | .3    | .3    |
| SW       | .1                 | .1   | *     | .0    | .0    | .0 |      | .3    | 6.6          |             | .0          | .2         | .4    | .2    | .2    | .1    | .4    | .3    |
| W        | .1                 | .2   | *     | .0    | .0    | .0 |      | .3    | 5.9          |             | .0          | .1         | .2    | .5    | .8    | .3    | .2    | .2    |
| NW       | .2                 | .8   | .5    | .1    | .0    | .0 |      | 1.6   | 9.8          |             | 1.7         | 1.2        | 1.3   | 1.3   | 2.0   | 1.8   | 1.9   | 1.4   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0           |             | .0          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .8                 |      |       |       |       |    |      | .8    | .0           |             | .8          | .7         | 1.2   | .9    | .0    | .9    | .8    | .7    |
| TOT OBS  | 187                | 1707 | 3123  | 577   | 28    | 1  | 5623 |       | 13.6         |             | 520         | 567        | 1042  | 660   | 531   | 546   | 1030  | 727   |
| TOT PCT  | 3.3                | 30.4 | 55.5  | 10.3  | .5    | *  |      | 100.0 |              |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |  |
|----------|------|--------------------|-------|-------|----------|------|--------------|-------------|-------------|------------|----------|----------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |      |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |  |
| N        | 3.1  | 13.7               | 6.4   | .3    | .0       |      | 23.5         | 12.9        | 21.7        | 24.3       | 26.0     | 22.4     |  |  |
| NE       | 5.0  | 35.7               | 21.2  | 1.2   | .1       |      | 63.1         | 14.2        | 64.2        | 61.7       | 62.4     | 64.2     |  |  |
| E        | 1.3  | 4.6                | 3.4   | .2    | *        |      | 9.5          | 14.0        | 10.6        | 10.1       | 7.5      | 9.4      |  |  |
| SE       | .3   | .3                 | .1    | *     | .0       |      | .7           | 9.0         | 1.1         | .5         | .7       | .6       |  |  |
| S        | .2   | .1                 | *     | .0    | .0       |      | .3           | 5.8         | .1          | .4         | .3       | .3       |  |  |
| SW       | .2   | .1                 | *     | .0    | .0       |      | .3           | 6.6         | .1          | .3         | .2       | .4       |  |  |
| W        | .2   | .1                 | .0    | .0    | .0       |      | .3           | 5.9         | *           | .4         | .5       | .2       |  |  |
| NW       | .6   | .7                 | .3    | .0    | .0       |      | 1.6          | 9.8         | 1.4         | 1.3        | 1.9      | 1.7      |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |      | .0           | .0          | .0          | .0         | .0       | .0       |  |  |
| CALM     | .8   |                    |       |       |          |      | .8           | .0          | .7          | 1.1        | .5       | .7       |  |  |
| TOT OBS  | 645  | 3105               | 1771  | 98    | 4        | 5623 |              | 13.6        | 1087        | 1702       | 1077     | 1757     |  |  |
| TOT PCT  | 11.5 | 55.2               | 31.5  | 1.7   | .1       |      | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |  |

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

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15.5N 23.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000Z | .7   | 2.6 | 33.5 | 53.4               | 9.4   | .4    | .0  | 13.3 | 100.0    | 1087      |
| 0600Z | 1.1  | 2.6 | 33.8 | 54.1               | 8.1   | .4    | .0  | 12.9 | 100.0    | 1702      |
| 1200Z | .5   | 2.3 | 26.2 | 59.3               | 11.0  | .6    | .1  | 14.1 | 100.0    | 1077      |
| 1800Z | .7   | 2.6 | 27.7 | 55.9               | 12.4  | .7    | .0  | 14.0 | 100.0    | 1757      |
| TOT   | .4   | 143 | 1707 | 3123               | 577   | 28    | 1   | 13.6 |          | 5623      |
| PCT   | .8   | 2.5 | 30.4 | 55.5               | 10.3  | .5    | *   |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
|          |      |      |      |            |              |                        |
| N        | 12.1 | 7.3  | 7.7  | 1.7        |              | 3.3                    |
| NE       | 28.8 | 13.0 | 17.1 | 3.4        |              | 3.2                    |
| E        | 2.8  | 1.2  | 1.1  | .2         |              | 2.7                    |
| SE       | .2   | .2   | .1   | *          |              | 3.0                    |
| S        | .2   | .1   | .0   | .0         |              | 1.7                    |
| SW       | .1   | .0   | .1   | .0         |              | 2.7                    |
| W        | .2   | .0   | .2   | .0         |              | 3.0                    |
| NW       | .8   | .5   | .5   | .0         |              | 2.9                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | .3   | .0   | .1   | .1         |              | 3.0                    |
| TOT OBS  | 517  | 254  | 306  | 62         | 1139         | 3.2                    |
| TOT PCT  | 45.4 | 22.3 | 26.9 | 5.4        | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH<br>ANY | 45/8<br>HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-----------|-------------|--------------|
| .1         | .0         | .1         | .9         | 1.8          | 1.5          | 1.2          | .1           | .0           | .2    | 23.1      |             |              |
| *          | .0         | *          | 2.0        | 5.0          | 3.4          | 2.0          | .5           | .3           | *     | 49.1      |             |              |
| .0         | .0         | .0         | .0         | .3           | .2           | .2           | .2           | .0           | .0    | 4.4       |             |              |
| .0         | .0         | .0         | .0         | .0           | *            | .1           | .0           | .0           | .0    | .4        |             |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .2        |             |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .2        |             |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .4        |             |              |
| .0         | .0         | .0         | .0         | .1           | .0           | *            | .1           | .0           | .0    | 1.7       |             |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0        |             |              |
| .0         | .0         | .0         | .1         | .0           | .1           | .0           | .0           | .0           | .0    | .3        |             |              |
| 1          | 0          | 1          | 34         | 82           | 59           | 39           | 10           | 3            | 3     | 907       |             | 1139         |
| .1         | .0         | .1         | 3.0        | 7.2          | 5.2          | 3.4          | .9           | .3           | .3    | 79.6      |             | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NM >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .4          | .5         | .5         | .5         | .5           | .5           | .5            | .5         |
| = OR >5000        | 1.2         | 1.3        | 1.4        | 1.4        | 1.4          | 1.4          | 1.4           | 1.4        |
| = OR >3500        | 3.8         | 4.4        | 4.8        | 4.8        | 4.8          | 4.8          | 4.8           | 4.8        |
| = OR >2000        | 8.0         | 9.5        | 10.0       | 10.1       | 10.1         | 10.1         | 10.1          | 10.1       |
| = OR >1000        | 14.3        | 16.7       | 17.1       | 17.2       | 17.2         | 17.2         | 17.2          | 17.2       |
| = OR >600         | 17.2        | 19.7       | 20.1       | 20.2       | 20.2         | 20.2         | 20.2          | 20.2       |
| = OR >300         | 17.3        | 19.8       | 20.2       | 20.3       | 20.3         | 20.3         | 20.3          | 20.3       |
| = OR >150         | 17.3        | 19.8       | 20.2       | 20.3       | 20.3         | 20.3         | 20.3          | 20.3       |
| = OR >0           | 17.3        | 19.8       | 20.3       | 20.4       | 20.4         | 20.4         | 20.4          | 20.4       |
| TOTAL             | 198         | 227        | 232        | 233        | 233          | 233          | 233           | 233        |

TOTAL NUMBER OF OBS: 1144

PCT FREQ NH <5/8: 79.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL<br>OBS |
|------|------|------|------|-----|-----|-----|-----|-----|-----|--------------|
| 23.2 | 18.1 | 15.5 | 13.2 | 9.1 | 8.3 | 5.0 | 5.2 | 2.3 | .1  | 1193         |

PERIOD: (PRIMARY) 1910-1973  
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15.5N 23.8W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | TOT %  | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .5   | 2.7  | .2  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 3.5          |
|              | TOT %  | .5   | 2.7  | .2  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 3.5          |
| 1<2          | PCP    | .1   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .1           |
|              | NO PCP | .2   | .9   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 1.1          |
|              | TOT %  | .3   | .9   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 1.2          |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .7   | 1.0  | .3  | .1 | *  | *  | .0 | .1  | .0  | .0   | .0    | 2.3          |
|              | TOT %  | .7   | 1.0  | .3  | .1 | *  | *  | .0 | .1  | .0  | .0   | .0    | 2.3          |
| 5<10         | PCP    | .0   | .0   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .1           |
|              | NO PCP | 7.8  | 16.8 | 2.2 | .4 | .2 | .1 | .1 | .4  | .0  | .2   | .2    | 28.2         |
|              | TOT %  | 7.8  | 16.8 | 2.3 | .4 | .2 | .1 | .1 | .4  | .0  | .2   | .2    | 28.3         |
| 10+          | PCP    | .1   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .1           |
|              | NO PCP | 17.0 | 41.8 | 3.5 | .2 | .1 | .1 | .2 | 1.3 | .0  | .3   | .3    | 64.7         |
|              | TOT %  | 17.1 | 41.8 | 3.5 | .2 | .1 | .1 | .2 | 1.3 | .0  | .3   | .3    | 64.8         |
| TOT OBS      |        | 1624 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |        | 26.5 | 63.3 | 6.3 | .7 | .4 | .3 | .4 | 1.7 | .0  | .5   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 11-21      | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .2   | .2   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .4           |
|              | 11-21      | *    | .8   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .9           |
|              | 22+        | .1   | .5   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .6           |
|              | TOT %      | .3   | 1.5  | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | 1.9          |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | *    | .3   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .3           |
|              | 11-21      | .1   | .3   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .5           |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .1           |
|              | TOT %      | .2   | .7   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .9           |
| 2<5          | 0-3        | *    | .0   | .1  | *  | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .1           |
|              | 4-10       | .3   | .5   | *   | .0 | *  | *  | .0 | .1  | .0  | .0   | .0    | 1.0          |
|              | 11-21      | .5   | 1.0  | .1  | *  | .0 | .0 | .0 | *   | .0  | .0   | .0    | 1.7          |
|              | 22+        | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .2           |
|              | TOT %      | .9   | 1.7  | .2  | *  | *  | *  | .0 | .1  | .0  | .0   | .0    | 3.0          |
| 5<10         | 0-3        | .2   | .1   | .1  | .1 | *  | *  | *  | .0  | .0  | .1   | .6    | .6           |
|              | 4-10       | 1.8  | 4.2  | .7  | .1 | .1 | *  | *  | .1  | .0  | .0   | .7    | 7.0          |
|              | 11-21      | 4.2  | 9.8  | .9  | *  | .0 | .0 | .0 | .2  | .0  | .0   | .1    | 15.1         |
|              | 22+        | .7   | 2.3  | .2  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .0    | 3.3          |
|              | TOT %      | 6.8  | 16.4 | 2.0 | .2 | .1 | .1 | .1 | .3  | .0  | .1   | .1    | 26.1         |
| 10+          | 0-3        | .4   | .8   | .2  | .0 | *  | *  | .1 | .1  | .0  | .3   | 1.9   | 1.9          |
|              | 4-10       | 5.3  | 12.5 | 1.7 | .1 | *  | *  | .1 | .5  | .0  | .0   | .0    | 20.3         |
|              | 11-21      | 10.2 | 27.2 | 2.0 | *  | .0 | *  | *  | .4  | .0  | .0   | .0    | 39.8         |
|              | 22+        | 1.2  | 4.3  | .5  | *  | .0 | .0 | .0 | .1  | .0  | .0   | .0    | 6.1          |
|              | TOT %      | 17.1 | 44.7 | 4.4 | .2 | .1 | .1 | .2 | 1.1 | .0  | .3   | .3    | 68.2         |
| TOT OBS      |            | 3096 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            | 25.3 | 64.9 | 6.8 | .4 | .2 | .2 | .3 | 1.5 | .0  | .4   | 100.0 |              |



PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

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AREA 0007 CAPE VERDE ISLANDS  
19.5N 23.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .0         | .4         | 2.5        | 7.3          | 3.6          | 3.3          | .7           | .7           | .0    | 18.5  | 81.5               | 275          |
| 06009          | .4         | .0         | .0         | 3.2        | 7.1          | 5.7          | 2.8          | 1.1          | .0           | .7    | 20.9  | 79.1               | 282          |
| 12015          | .0         | .0         | .0         | 2.8        | 7.3          | 7.6          | 5.4          | .6           | .3           | .0    | 24.1  | 75.9               | 316          |
| 18021          | .0         | .0         | .0         | 3.0        | 6.6          | 3.3          | 1.6          | 1.0          | .0           | .3    | 15.8  | 84.2               | 304          |
| TOT            | 1          | 0          | 1          | 34         | 83           | 60           | 39           | 10           | 3            | 234   | 943   | 1177               |              |
| PCT            | .1         | .0         | .1         | 2.9        | 7.1          | 5.1          | 3.3          | .8           | .3           | .3    | 19.9  | 80.1               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 1.2   | .3  | 2.2 | 25.0 | 71.3 | 647          |
| 06009          | .0   | 2.5   | 1.5 | 2.6 | 27.2 | 66.2 | 882          |
| 12015          | .0   | 1.5   | .4  | 3.6 | 22.7 | 71.8 | 671          |
| 18021          | .0   | 2.2   | 1.0 | 3.5 | 29.1 | 64.3 | 922          |
| TOT            | 0    | 60    | 27  | 93  | 822  | 2120 | 3122         |
| PCT            | .0   | 1.9   | .9  | 3.0 | 26.3 | 67.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0           | .4         | 5.6         | 14.6            | 79.8              | 267          |
| 06009          | .4           | .4         | 6.3         | 17.6            | 76.1              | 272          |
| 12015          | .0           | .0         | 5.8         | 21.2            | 73.0              | 311          |
| 18021          | .0           | .0         | 6.5         | 12.9            | 80.6              | 294          |
| TOT            | 1            | 2          | 69          | 191             | 884               | 1144         |
| PCT            | .1           | .2         | 6.0         | 16.7            | 77.3              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .1    | .0    | .0    | .0    | .1    | .0    | .0     | 2            | .2          |
| 80/84  | .0   | .0    | .0    | .1    | .2    | .3    | .2    | .0     | 8            | .7          |
| 75/79  | .0   | .0    | .1    | .5    | 3.1   | 4.4   | 1.5   | .9     | 119          | 10.5        |
| 70/74  | .0   | .0    | .0    | .5    | 9.5   | 28.1  | 22.7  | 6.8    | 764          | 67.6        |
| 65/69  | .0   | .0    | .0    | .3    | 1.3   | 6.7   | 8.8   | 3.8    | 236          | 20.9        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .1    | .0    | .0     | 1            | .1          |
| TOT    | 0    | 1     | 1     | 16    | 159   | 449   | 374   | 130    | 1130         | 100.0       |
| PCT    | .0   | .1    | .1    | 1.4   | 14.1  | 39.7  | 33.1  | 11.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|-------|------|------|-----|----|----|----|----|-----|-----|------|
| 85/89 | .0   | .1   | .0  | .0 | .0 | .0 | .1 | .0  | .0  | .0   |
| 80/84 | .0   | .0   | .1  | .0 | .1 | .0 | .0 | .0  | .0  | .0   |
| 75/79 | .2   | .3   | 1.0 | .2 | .1 | .0 | .3 | .1  | .0  | .1   |
| 70/74 | 2.9  | 5.9  | 2.8 | .2 | .0 | .0 | .1 | 1.4 | .0  | .3   |
| 65/69 | 18.4 | 44.4 | 1.0 | .0 | .1 | .0 | .1 | .1  | .0  | .4   |
| 60/64 | 4.3  | 14.9 | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| TOT   | .0   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| PCT   | 25.8 | 65.7 | 4.9 | .4 | .2 | *  | .5 | 1.6 | .0  | .7   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 79  | 75  | 73  | 70  | 67 | 65 | 63  | 69.9 | 1076         |
| 06009          | 80  | 76  | 74  | 70  | 66 | 65 | 63  | 69.8 | 1671         |
| 12015          | 85  | 81  | 78  | 73  | 69 | 67 | 66  | 73.2 | 1013         |
| 18021          | 86  | 81  | 77  | 72  | 68 | 66 | 65  | 72.1 | 1677         |
| TOT            | 86  | 80  | 76  | 71  | 67 | 65 | 63  | 71.2 | 5437         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| 4OUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .3    | 5.9   | 39.2  | 40.6  | 14.0   | 81   | 286          |
| 06009         | .0   | .7    | 7.2   | 31.0  | 45.1  | 15.9   | 81   | 277          |
| 12015         | .0   | 2.7   | 22.8  | 44.6  | 23.1  | 6.8    | 75   | 294          |
| 18021         | .0   | 2.5   | 20.4  | 43.9  | 24.2  | 9.1    | 76   | 285          |
| TOT           | 0    | 18    | 162   | 454   | 378   | 130    | 78   | 1142         |

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>Fog | WG<br>Fog |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .1       | .0       | 1     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .1       | .1       | 3     | .0       | .2        |
| 9/10               | .0       | .0       | .0       | .1       | .3       | .1       | .0       | 8     | .0       | .5        |
| 7/8                | .0       | .0       | .1       | .0       | .3       | .1       | .0       | 7     | .1       | .4        |
| 6                  | .0       | .0       | .0       | .1       | .3       | .0       | .0       | 6     | .0       | .4        |
| 5                  | .0       | .0       | .1       | .5       | .5       | .1       | .0       | 18    | .1       | 1.1       |
| 4                  | .0       | .1       | .3       | 1.0      | .5       | .1       | .0       | 30    | .1       | 1.8       |
| 3                  | .0       | .0       | .0       | 2.3      | .5       | .0       | .0       | 51    | .1       | 3.2       |
| 2                  | .0       | .0       | 1.0      | 3.7      | .3       | .1       | .0       | 78    | .3       | 4.8       |
| 1                  | .0       | .1       | 3.5      | 6.3      | .3       | .0       | .0       | 155   | .9       | 9.3       |
| 0                  | .0       | .6       | 10.6     | 5.9      | .1       | .0       | .0       | 262   | .7       | 16.6      |
| -1                 | .0       | 1.5      | 15.3     | 4.8      | .0       | .0       | .0       | 327   | 1.5      | 20.1      |
| -2                 | .0       | 2.5      | 12.9     | 1.9      | .1       | .0       | .0       | 265   | .5       | 17.0      |
| -3                 | .0       | 3.0      | 7.3      | 1.3      | .1       | .0       | .0       | 176   | .5       | 11.1      |
| -4                 | .0       | .9       | 2.4      | .5       | .0       | .0       | .0       | 58    | .1       | 3.8       |
| -5                 | .0       | .9       | 1.3      | .4       | .0       | .0       | .0       | 39    | .0       | 2.6       |
| -6                 | .0       | .4       | .4       | .2       | .0       | .0       | .0       | 15    | .0       | 1.0       |
| -7/-8              | .1       | .3       | .4       | .1       | .0       | .0       | .0       | 13    | .0       | .9        |
| -9/-10             | .0       | .1       | .1       | .0       | .0       | .0       | .0       | 3     | .0       | .2        |
| -11/-13            | .1       | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 2        | 157      | 852      | 442      | 53       | 9        | 1        | 1516  | 74       | 1442      |
| PCT                | .1       | 10.4     | 56.2     | 29.2     | 3.5      | .6       | .1       | 100.0 | 4.9      | 95.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |  | PCT  | NE  |      |       |       |       |     |  | PCT  |
|---------|-----|------|-------|-------|-------|-----|--|------|-----|------|-------|-------|-------|-----|--|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |
| <1      | .9  | .7   | .2    | .0    | .0    | .0  |  | 1.7  | .2  | .9   | .0    | .0    | .0    | .0  |  | 1.1  |
| 1-2     | .2  | 3.5  | 3.6   | .0    | .0    | .0  |  | 7.2  | .3  | 7.6  | 6.8   | .0    | .0    | .0  |  | 14.7 |
| 3-4     | .0  | 2.6  | 6.9   | 1.1   | .0    | .0  |  | 10.6 | .0  | 4.7  | 16.9  | .8    | .0    | .0  |  | 22.4 |
| 5-6     | .0  | .3   | 4.9   | .6    | .0    | .0  |  | 5.8  | .0  | .5   | 12.3  | 3.3   | .2    | .0  |  | 16.3 |
| 7       | .0  | .0   | 2.4   | .6    | .0    | .0  |  | 2.9  | .0  | .0   | 4.3   | 2.3   | .0    | .0  |  | 6.6  |
| 8-9     | .0  | .0   | .6    | .3    | .0    | .0  |  | .8   | .0  | .2   | 1.5   | .2    | .0    | .0  |  | 1.9  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .5    | .0    | .0    | .0  |  | .5   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .5    | .0    | .0  |  | .5   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |
| TOT PCT | 1.1 | 7.1  | 18.4  | 2.5   | .0    | .0  |  | 29.1 | .5  | 13.8 | 42.2  | 7.2   | .2    | .0  |  | 63.9 |

| HGT     | E   |      |       |       |       |     |  | PCT | SE  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .2  | .0   | .0    | .0    | .0    | .0  |  | .2  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 1-2     | .0  | 1.4  | .2    | .0    | .0    | .0  |  | 1.6 | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 3-4     | .2  | .7   | .6    | .0    | .0    | .0  |  | 1.5 | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 5-6     | .0  | .0   | .6    | .0    | .0    | .0  |  | .6  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 7       | .0  | .0   | .5    | .3    | .0    | .0  |  | .8  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  |  | .1  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .3  | 2.1  | 2.0   | .6    | .0    | .0  |  | 5.0 | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |

PERIOD: (OVER-ALL) 1963-1973

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15.5N 23.8W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .0   | .0    | .0    | .0    | .0  | .2  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .1   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | .1   | .0    | .0    | .0    | .0  | .3  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .0   | .0    | .0    | .0    | .0  | .2  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |           |
| 1-2     | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .2   | .1    | .0    | .0    | .0  | .2  |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .6    | .0    | .0    | .0  | .7  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | .0   | .2    | .0    | .0    | .0  | .3  | .0  | .4   | .7    | .0    | .0    | .0  | 1.1 | 99.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.9 | 1.9  | .2    | .0    | .0    | .0  | 3.9   |         |
| 1-2     | .5  | 12.9 | 10.8  | .0    | .0    | .0  | 24.2  |         |
| 3-4     | .2  | 8.2  | 24.8  | 1.9   | .0    | .0  | 35.0  |         |
| 5-6     | .0  | .8   | 17.7  | 3.9   | .2    | .0  | 22.6  |         |
| 7       | .0  | .0   | 7.2   | 3.1   | .0    | .0  | 10.4  |         |
| 8-9     | .0  | .0   | 2.0   | .6    | .0    | .0  | 2.8   |         |
| 10-11   | .0  | .0   | .5    | .2    | .0    | .0  | .6    |         |
| 12      | .0  | .0   | .0    | .5    | .0    | .0  | .5    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.5 | 23.9 | 63.3  | 10.2  | .2    | .0  | 100.0 | 637     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.7 | 11.1 | 14.2 | 7.1  | 3.7  | .9  | .2    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 340   | 3        |
| 6-7          | .0  | .9   | 4.7  | 9.7  | 5.6  | 3.4 | .5    | .3  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 222   | 6        |
| 8-9          | .0  | .9   | 1.1  | 4.0  | 4.0  | 2.8 | 1.1   | .5  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 128   | 6        |
| 10-11        | .0  | .0   | .5   | .3   | 2.1  | 1.0 | .2    | .0  | .1    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 40    | 8        |
| 12-13        | .0  | .0   | .8   | .5   | .7   | .5  | .5    | .1  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 29    | 7        |
| >13          | .0  | .0   | .0   | .0   | .5   | .1  | .1    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 7     | 8        |
| INDEX        | .5  | .8   | 4.1  | 4.8  | 1.0  | .8  | .0    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 106   | 4        |
| TOTAL        | 19  | 120  | 222  | 231  | 153  | 83  | 23    | 10  | 8     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 872   | 5        |
| PCT          | 2.2 | 13.8 | 25.5 | 26.5 | 17.5 | 9.5 | 2.6   | 1.1 | .9    | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1908-1973  
(OVER-ALL) 1854-1973

APRIL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| N        | .0                 | .0        | .0   | .0        | .0   | .0              | .2   | .2                      | .0             | .0        | 4.5         | .0                  | 4.6        | 1.7             | 89.0       |
| NE       | .0                 | .1        | .0   | .0        | .0   | .0              | .0   | .1                      | .0             | .0        | 3.7         | .0                  | 4.1        | .5              | 91.6       |
| E        | .0                 | .0        | .8   | .0        | .0   | .0              | .8   | 1.6                     | .0             | .8        | 11.3        | .0                  | 1.4        | .0              | 85.0       |
| SE       | 23.5               | .0        | 11.8 | .0        | .0   | .0              | .0   | 23.5                    | .0             | .0        | 5.9         | .0                  | .0         | .0              | 70.6       |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| W        | 16.7               | .0        | .0   | .0        | .0   | .0              | .0   | 16.7                    | .0             | .0        | .0          | .0                  | .0         | .0              | 83.3       |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 10.5       | .0              | 89.5       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 12.5      | .0          | .0                  | 12.5       | .0              | 75.0       |
| TOT PCT  | .2                 | .1        | .1   | .0        | .0   | .0              | .1   | .4                      | .0             | .1        | 4.4         | .0                  | 4.1        | .8              | 90.2       |
| TOT OBS: | 1662               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| 00003      | .5                 | .0        | .3   | .0        | .0   | .0              | .0   | .5                      | .0             | .3        | 3.0         | .0                  | 4.0        | .5              | 91.7       |
| 06009      | .5                 | .2        | .0   | .0        | .0   | .0              | .2   | .9                      | .0             | .2        | 4.6         | .0                  | 2.3        | .5              | 91.8       |
| 12015      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 3.6         | .0                  | 5.4        | .5              | 90.4       |
| 18021      | .0                 | .0        | .2   | .0        | .0   | .0              | .2   | .4                      | .0             | .2        | 6.6         | .0                  | 4.5        | 1.5             | 86.8       |
| TOT PCT    | .2                 | .1        | .1   | .0        | .0   | .0              | .1   | .5                      | .0             | .2        | 4.6         | .0                  | 4.0        | .8              | 90.1       |
| TOT OBS:   | 1692               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | .5                 | 8.1  | 14.0  | 1.9   | *     | .0  |      | 24.6      | 13.2     | 30.2     | 15.8       | 25.5  | 28.8  | 33.4  | 19.6  | 24.0  | 20.9  |    |
| NE       | .7                 | 18.0 | 36.6  | 5.9   | .1    | .0  |      | 61.2      | 13.8     | 61.1     | 61.6       | 58.9  | 58.3  | 60.1  | 64.3  | 63.8  | 62.0  |    |
| E        | .3                 | 3.2  | 5.9   | 1.3   | .1    | .0  |      | 10.7      | 14.2     | 5.9      | 18.2       | 11.1  | 9.5   | 4.2   | 12.4  | 9.4   | 13.7  |    |
| SE       | .1                 | .5   | .2    | *     | .0    | .0  |      | .8        | 8.7      | .5       | 1.5        | .9    | .6    | .4    | 1.1   | .6    | .8    |    |
| S        | .1                 | .1   | .1    | .0    | .0    | .0  |      | .2        | 10.0     | .0       | .3         | .2    | .5    | .4    | .3    | .0    | .1    |    |
| SW       | .1                 | .1   | *     | .0    | .0    | .0  |      | .1        | 4.5      | .0       | .2         | .3    | .2    | *     | .2    | *     | .0    |    |
| W        | .1                 | .2   | .1    | .0    | .0    | .0  |      | .3        | 6.5      | .4       | .1         | .5    | .4    | .1    | .3    | .3    | .4    |    |
| NW       | .1                 | .9   | .4    | *     | .0    | .0  |      | 1.5       | 9.3      | 1.6      | 1.2        | 1.7   | 1.6   | 1.4   | 1.1   | 1.2   | 1.7   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | .6                 |      |       |       |       |     |      | .6        | .0       | .4       | 1.1        | .9    | .1    | .0    | .9    | .7    | .4    |    |
| TOT OBS  | 144                | 1843 | 3404  | 545   | 12    | 0   | 5948 |           | 13.5     | 542      | 611        | 1137  | 710   | 526   | 571   | 1052  | 799   |    |
| TOT PCT  | 2.4                | 31.0 | 57.2  | 9.2   | .2    | .0  |      | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 2.6                | 14.6 | 7.1   | .3    | .0  |           | 24.6     | 13.2     | 22.5       | 26.7  | 26.2  | 22.7  |    |
| NE       | 4.8                | 36.4 | 18.8  | 1.1   | *   |           | 61.2     | 13.8     | 61.4       | 58.7  | 62.3  | 63.0  |    |
| E        | 1.1                | 5.5  | 3.8   | .3    | *   |           | 10.7     | 14.2     | 12.4       | 10.5  | 8.5   | 11.3  |    |
| SE       | .4                 | .3   | .1    | *     | .0  |           | .8       | 8.7      | 1.0        | .8    | .7    | .7    |    |
| S        | .1                 | *    | .1    | .0    | .0  |           | .2       | 10.0     | .2         | .3    | .3    | .1    |    |
| SW       | .1                 | *    | .0    | .0    | .0  |           | .1       | 4.5      | .1         | .2    | .1    | *     |    |
| W        | .2                 | .1   | *     | .0    | .0  |           | .3       | 6.5      | .2         | .4    | .2    | .3    |    |
| NW       | .5                 | .8   | .2    | .0    | .0  |           | 1.5      | 9.3      | 1.4        | 1.7   | 1.2   | 1.4   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | .6                 |      |       |       |     |           | .6       | .0       | .8         | .6    | .5    | .5    |    |
| TOT OBS  | 621                | 3635 | 1786  | 105   | 1   | 5948      |          | 13.5     | 1153       | 1847  | 1097  | 1851  |    |
| TOT PCT  | 10.4               | 57.8 | 30.0  | 1.8   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1908-1973  
(OVER-ALL) 1854-1973

APRIL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00603 | .8   | 1.6 | 31.2 | 57.8  | 8.3   | .2    | .0  | 13.3  | 100.0    | 1153      |
| 06609 | .6   | 2.7 | 36.0 | 52.4  | 7.7   | .2    | .0  | 12.7  | 100.0    | 1847      |
| 12615 | .5   | 1.5 | 28.8 | 58.8  | 10.4  | .1    | .0  | 14.0  | 100.0    | 1097      |
| 18621 | .5   | 1.4 | 27.1 | 60.3  | 10.4  | .3    | .0  | 14.0  | 100.0    | 1851      |
| TOT   | 35   | 109 | 1843 | 3404  | 545   | 12    | 0   | 13.5  |          | 5948      |
| PCT   | .6   | 1.8 | 31.0 | 57.2  | 9.2   | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & DBSCD | TOTAL DBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 13.8 | 6.9  | 5.9  | 1.4       |           | 2.9              |
| NE       | 26.1 | 16.9 | 17.7 | 2.6       |           | 3.3              |
| E        | 2.3  | 1.5  | 1.9  | .3        |           | 3.4              |
| SE       | .2   | *    | .1   | .1        |           | 4.3              |
| S        | .1   | .1   | .1   | .0        |           | 3.3              |
| SW       | .2   | *    | *    | .0        |           | 1.5              |
| W        | .1   | .0   | .1   | .1        |           | 4.0              |
| NW       | .5   | .4   | *    | .1        |           | 2.4              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | .6   | .0   | .0   | .0        |           | .1               |
| TOT DBS  | 478  | 282  | 281  | 49        | 1090      | 3.2              |
| TOT PCT  | 43.9 | 25.9 | 25.8 | 4.5       | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL DBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .0  | .0  | .4  | .2  | 1.9  | 1.8  | .7   | .4   | .1   | .1    | 22.4            |           |
| NE      | .1  | .0  | .1  | 1.6 | 5.3  | 3.1  | 2.1  | .9   | .1   | .2    | 49.8            |           |
| E       | .0  | .0  | .0  | .6  | .1   | .1   | .3   | .1   | .1   | .0    | 4.6             |           |
| SE      | .1  | .0  | .0  | .0  | .1   | .0   | .0   | .0   | .0   | .0    | .2              |           |
| S       | .0  | .0  | .0  | .0  | .1   | .0   | .0   | .0   | .0   | .0    | .1              |           |
| SW      | .0  | .0  | *   | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .2              |           |
| W       | .0  | .0  | .1  | .0  | .0   | .0   | .1   | .0   | .0   | .0    | .1              |           |
| NW      | .0  | .0  | .1  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .9              |           |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM    | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .6              |           |
| TOT DBS | 2   | 0   | 7   | 26  | 81   | 54   | 35   | 15   | 4    | 4     | 862             | 1090      |
| TOT PCT | .2  | .0  | .6  | 2.4 | 7.4  | 5.0  | 3.2  | 1.4  | .4   | .4    | 79.1            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | = OR >10  | = OR >5 | = OR >2 | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
| = OR >6500     | .4        | .6      | .7      | .7      | .7        | .7        | .7         | .7      |
| = OR >5000     | 1.6       | 2.0     | 2.1     | 2.1     | 2.1       | 2.1       | 2.1        | 2.1     |
| = OR >3500     | 4.3       | 5.2     | 5.3     | 5.3     | 5.3       | 5.3       | 5.3        | 5.3     |
| = OR >2000     | 8.3       | 10.2    | 10.3    | 10.3    | 10.3      | 10.3      | 10.3       | 10.3    |
| = OR >1000     | 14.0      | 17.5    | 17.6    | 17.6    | 17.6      | 17.6      | 17.6       | 17.6    |
| = OR >600      | 15.9      | 19.9    | 20.0    | 20.0    | 20.0      | 20.0      | 20.0       | 20.0    |
| = OR >300      | 16.3      | 20.5    | 20.6    | 20.6    | 20.6      | 20.6      | 20.6       | 20.6    |
| = OR >150      | 16.3      | 20.5    | 20.6    | 20.6    | 20.6      | 20.6      | 20.6       | 20.6    |
| = OR >0        | 16.4      | 20.7    | 20.8    | 20.8    | 20.8      | 20.8      | 20.8       | 20.8    |
| TOTAL          | 181       | 228     | 229     | 229     | 229       | 229       | 229        | 229     |

TOTAL NUMBER OF OBS: 1102

PCT FREQ NH <5/8: 79.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8 DBSCD | TOTAL DBS |
|--|------|------|------|------|------|-----|-----|-----|---------|-----------|
|  | 18.1 | 19.2 | 15.7 | 14.5 | 10.9 | 5.6 | 8.0 | 4.5 | 3.4     | .1        |
|  |      |      |      |      |      |     |     |     |         | 1169      |

PERIOD: (PRIMARY) 1908-1973  
(OVER-ALL) 1894-1973

APRIL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|----|-----|------|------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .0   | .0           |
|              | NO PCP | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .0   | .0           |
|              | TOT %  | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .0   | .0           |
| 1/2<1        | PCP    | .0   | .1   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .1   | .1           |
|              | NO PCP | 1.1  | 2.2  | .9  | *  | .0 | .0 | .0 | .0 | .0  | .0   | 4.2  | 4.2          |
|              | TOT %  | 1.1  | 2.2  | .9  | *  | .0 | .0 | .0 | .0 | .0  | .0   | 4.2  | 4.2          |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .0   | .0           |
|              | NO PCP | .3   | .5   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .8   | .8           |
|              | TOT %  | .3   | .5   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .8   | .8           |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0 | .0  | .0   | .0   | .0           |
|              | NO PCP | .3   | .4   | .1  | .1 | .0 | .0 | .0 | *  | .0  | .0   | .9   | .9           |
|              | TOT %  | .3   | .4   | .1  | .1 | .0 | .0 | .0 | *  | .0  | .0   | .9   | .9           |
| 5<10         | PCP    | .1   | .0   | .1  | .1 | .0 | .0 | .0 | .0 | .0  | .0   | .3   | .3           |
|              | NO PCP | 8.6  | 21.1 | 2.9 | .1 | .2 | .1 | .2 | .3 | .0  | .1   | 33.6 | 33.6         |
|              | TOT %  | 8.7  | 21.1 | 3.0 | .2 | .2 | .1 | .2 | .3 | .0  | .1   | 33.9 | 33.9         |
| 10+          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .1 | .0 | .0  | .0   | .1   | .1           |
|              | NO PCP | 15.7 | 38.9 | 3.8 | .2 | .1 | .1 | .2 | .8 | .0  | .4   | 60.1 | 60.1         |
|              | TOT %  | 15.7 | 38.9 | 3.8 | .2 | .1 | .1 | .2 | .8 | .0  | .4   | 60.2 | 60.2         |
| TOT OBS      |        |      |      |     |    |    |    |    |    |     |      |      | 1660         |
| TOT PCT      |        |      |      |     |    |    |    |    |    |     |      |      | 100.0        |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | 4-10       | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | 11-21      | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | TOT %      | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
| 1/2<1        | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0   | .0           |
|              | 4-10       | .3   | .2   | .1  | *  | .0 | .0 | .0 | .0  | .0  | .0   | .6   | .6           |
|              | 11-21      | .3   | .6   | .3  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 1.3  | 1.3          |
|              | 22+        | .1   | .3   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .4   | .4           |
|              | TOT %      | .6   | 1.2  | .5  | *  | .0 | .0 | .0 | .0  | .0  | .0   | 2.2  | 2.2          |
| 1<2          | 0-3        | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *    | *            |
|              | 4-10       | .0   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1   | .1           |
|              | 11-21      | .2   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .4   | .4           |
|              | 22+        | *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2   | .2           |
|              | TOT %      | .2   | .4   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .6   | .6           |
| 2<5          | 0-3        | .0   | .0   | *   | *  | .0 | .0 | .0 | .0  | .0  | .0   | .1   | .1           |
|              | 4-10       | .1   | .2   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .3   | .3           |
|              | 11-21      | .3   | .6   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .9   | .9           |
|              | 22+        | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3   | .3           |
|              | TOT %      | .6   | .9   | *   | *  | .0 | .0 | .0 | *   | .0  | .0   | 1.6  | 1.6          |
| 5<10         | 0-3        | *    | .1   | *   | .0 | .0 | .0 | .1 | *   | .0  | .1   | .4   | .4           |
|              | 4-10       | 2.4  | 3.9  | .7  | .1 | .1 | *  | .1 | .2  | .0  | .0   | 7.5  | 7.5          |
|              | 11-21      | 4.8  | 11.5 | 1.2 | *  | *  | *  | .1 | .0  | .0  | .0   | 17.8 | 17.8         |
|              | 22+        | .9   | 2.1  | .2  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 3.2  | 3.2          |
|              | TOT %      | 8.0  | 17.7 | 2.2 | .1 | .1 | *  | .2 | .4  | .0  | .1   | 28.9 | 28.9         |
| 10+          | 0-3        | .3   | .6   | .2  | .1 | *  | *  | *  | .1  | .0  | .3   | 1.7  | 1.7          |
|              | 4-10       | 5.9  | 13.1 | 1.8 | .1 | .1 | *  | .1 | .9  | .0  | .0   | 22.0 | 22.0         |
|              | 11-21      | 10.2 | 26.2 | 2.0 | *  | *  | *  | .3 | .0  | .0  | .0   | 38.7 | 38.7         |
|              | 22+        | 1.2  | 2.8  | .2  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 4.2  | 4.2          |
|              | TOT %      | 17.6 | 42.7 | 4.2 | .2 | .1 | .1 | .2 | 1.3 | .0  | .3   | 66.7 | 66.7         |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |      | 3198         |
| TOT PCT      |            |      |      |     |    |    |    |    |     |     |      |      | 100.0        |



## APRIL

PERIOD: (PRIMARY) 1908-1973  
(OVER-ALL) 1854-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1499 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .4         | .0         | .4         | 2.2        | 5.7          | 4.3          | 2.9          | 1.8          | .0           | .4    | 17.9  | 82.1               | 279          |
| 06009          | .0         | .0         | .7         | 2.6        | 8.9          | 5.9          | 2.2          | 1.1          | .4           | .0    | 21.8  | 78.2               | 271          |
| 12015          | .3         | .0         | 1.3        | 1.6        | 7.4          | 6.1          | 3.6          | 1.9          | 1.0          | .3    | 23.6  | 76.4               | 309          |
| 18021          | .0         | .0         | .0         | 2.8        | 6.3          | 2.8          | 3.5          | .3           | .0           | .7    | 16.4  | 83.6               | 287          |
| TOT            | 2          | 0          | 7          | 26         | 81           | 55           | 35           | 15           | 4            | 229   | 917   | 1146               |              |
| PCT            | .2         | .0         | .6         | 2.3        | 7.1          | 4.8          | 3.1          | 1.3          | .3           | .3    | 20.0  | 80.0               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 1.9   | .1  | 2.0 | 27.5 | 68.5 | 699          |
| 06009          | .0   | 2.1   | .3  | .8  | 28.3 | 68.5 | 933          |
| 12015          | .0   | 2.0   | .9  | 1.2 | 27.1 | 68.8 | 661          |
| 18021          | .0   | 3.1   | 1.1 | 2.4 | 31.9 | 61.6 | 935          |
| TOT            | 0    | 75    | 20  | 51  | 933  | 2149 | 3228         |
| PCT            | .0   | 2.3   | .6  | 1.6 | 28.9 | 66.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .4            | .8         | 4.2         | 15.8            | 80.0              | 265          |
| 06009          | .0            | .8         | 3.8         | 18.7            | 77.5              | 262          |
| 12015          | .3            | 1.7        | 4.0         | 21.1            | 74.8              | 298          |
| 18021          | .0            | .0         | 5.8         | 14.1            | 80.1              | 277          |
| TOT            | 2             | 9          | 49          | 193             | 860               | 1102         |
| PCT            | .2            | .8         | 4.4         | 17.5            | 78.0              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .2    | .1    | .0    | .0    | .0     | 3            | .3          |
| 80/84  | .0   | .0    | .1    | .0    | .6    | .5    | .3    | .0     | 18           | 1.5         |
| 75/79  | .0   | .0    | .1    | .2    | 2.8   | 7.9   | 1.8   | .3     | 158          | 13.2        |
| 70/74  | .0   | .0    | .0    | .4    | 10.7  | 29.8  | 22.8  | 6.8    | 846          | 70.5        |
| 65/69  | .0   | .0    | .0    | .0    | 1.8   | 6.4   | 5.0   | 1.3    | 175          | 14.6        |
| TOTAL  | 0    | 0     | 2     | 9     | 192   | 536   | 360   | 101    | 1200         | 100.0       |
| PCT    | .0   | .0    | .2    | .8    | 16.0  | 44.7  | 30.0  | 8.4    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW | VAR | CALM |
|------|------|-----|----|----|----|----|----|-----|------|
| *    | *    | .1  | .0 | .0 | *  | *  | .0 | .0  | .0   |
| .4   | .7   | .2  | .1 | .0 | .0 | .1 | *  | .0  | .0   |
| 3.5  | 7.9  | 1.0 | .2 | .1 | *  | .1 | .2 | .0  | .1   |
| 20.4 | 44.6 | 4.3 | .2 | .1 | .1 | .0 | .3 | .0  | .5   |
| 3.8  | 9.8  | .4  | *  | .1 | .1 | .1 | .3 | .0  | .1   |
| 28.2 | 63.0 | 5.9 | .5 | .3 | .2 | .3 | .9 | .0  | .7   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 32  | 75  | 73  | 70  | 67 | 65 | 62  | 70.3 | 1130         |
| 06009          | 84  | 77  | 74  | 70  | 67 | 65 | 62  | 70.4 | 1815         |
| 12015          | 87  | 82  | 79  | 73  | 70 | 68 | 67  | 73.7 | 1040         |
| 18021          | 87  | 82  | 78  | 72  | 68 | 67 | 64  | 72.5 | 1758         |
| TOT            | 87  | 80  | 77  | 71  | 68 | 66 | 62  | 71.6 | 5743         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 1.4   | 5.1   | 42.6  | 37.5  | 13.5  | 80    | 296    |      |              |
| 06009          | .0   | .3    | 8.0   | 37.5  | 42.5  | 11.7  | 80    | 299    |      |              |
| 12015          | .0   | .6    | 30.2  | 46.0  | 18.6  | 4.5   | 74    | 311    |      |              |
| 18021          | .0   | 1.3   | 21.0  | 51.7  | 21.6  | 4.4   | 75    | 315    |      |              |
| TOT            | 0    | 11    | 199   | 544   | 364   | 103   | 77    | 1221   |      |              |

APRIL

PERIOD: (PRIMARY) 1908-1973  
(OVER-ALL) 1854-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .1       | .0       | .0       | 1     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .1       | 2     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .1       | 5     | .0       | .3        |
| 7/8                | .0       | .0       | .1       | .7       | .5       | .0       | 19    | .1       | 1.2       |
| 6                  | .0       | .0       | .2       | .3       | .1       | .0       | 9     | .0       | .6        |
| 5                  | .0       | .1       | .7       | 1.0      | .1       | .0       | 27    | .3       | 1.4       |
| 4                  | .0       | .1       | 1.2      | 1.0      | .0       | .0       | 35    | .1       | 2.2       |
| 3                  | .0       | .7       | 1.7      | .7       | .0       | .0       | 46    | .1       | 2.9       |
| 2                  | .0       | 1.4      | 4.0      | 1.0      | .0       | .0       | 98    | .3       | 6.2       |
| 1                  | .1       | 2.9      | 5.9      | .3       | .0       | .0       | 141   | .4       | 8.8       |
| 0                  | .1       | 9.9      | 6.0      | .0       | .0       | .0       | 245   | 1.1      | 14.9      |
| -1                 | 1.6      | 14.9     | 5.4      | .1       | .0       | .0       | 336   | 1.1      | 20.9      |
| -2                 | 1.3      | 13.9     | 3.2      | .1       | .0       | .0       | 282   | .7       | 17.7      |
| -3                 | .9       | 8.7      | .5       | .1       | .0       | .0       | 155   | .2       | 10.0      |
| -4                 | .9       | 3.7      | .5       | .1       | .0       | .0       | 79    | .2       | 5.0       |
| -5                 | .3       | 1.6      | .0       | .0       | .0       | .0       | 29    | .0       | 1.9       |
| -6                 | .7       | .7       | .0       | .0       | .0       | .0       | 15    | .0       | 1.0       |
| -7/-8              | .0       | .1       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| -9/-10             | .0       | .1       | .0       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 84       |          | 449      |          | 14       | 3        | 1527  | 70       | 1457      |
| PCT                | 5.5      | 58.7     | 29.4     | 5.2      | .9       | .2       | 100.0 | 4.6      | 95.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | .3   | .0    | .0    | .0    | .0  | .4   | .2  | .4   | .2    | .0    | .0    | .0  | .8   |
| 1-2     | .0  | 3.2  | 3.5   | .0    | .0    | .0  | 6.8  | .0  | 6.1  | 6.1   | .0    | .0    | .0  | 12.3 |
| 3-4     | .2  | 3.1  | 5.3   | .4    | .0    | .0  | 9.0  | .0  | 5.8  | 15.6  | .7    | .0    | .0  | 22.2 |
| 5-6     | .0  | .4   | 5.0   | 1.4   | .0    | .0  | 6.7  | .0  | 1.1  | 15.5  | 1.3   | .0    | .0  | 17.9 |
| 7       | .0  | .0   | 2.1   | .5    | .0    | .0  | 2.7  | .0  | .5   | 7.4   | 1.8   | .0    | .0  | 9.6  |
| 8-9     | .0  | .0   | .3    | .3    | .0    | .0  | .6   | .0  | .0   | 2.4   | .6    | .0    | .0  | 3.0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .2    | .5    | .0    | .0  | .7   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | *    |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 6.9  | 16.3  | 2.8   | .0    | .0  | 26.4 | .2  | 14.0 | 47.4  | 5.1   | .0    | .0  | 66.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 1.1  | .8    | .0    | .0    | .0  | 2.0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .3   | 1.1   | .3    | .0    | .0  | 1.7 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .3    | .3    | .0    | .0  | .6  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .3    | .0    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 1.4  | 2.6   | .6    | .0    | .0  | 4.6 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |

PERIOD: (OVER-ALL) 1963-1973

APRIL

TABLE 18 (CONT)

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .1   | .2    | .0    | .0    | .0  | .3  | .0  | *    | .0    | .0    | .0    | .0  | *   |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .5   | .0    | .0    | .0    | .0  | .5  | .5        |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .1   | *     | .0    | .0    | .0  | .1  | .1        |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .4        |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   | *         |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | 1.0  | .1    | .0    | .0    | .0  | 1.1 | 99.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.2 | 1.2  | .2    | .0    | .0    | .0  | 2.6   |         |
| 1-2     | .0  | 11.0 | 10.5  | .0    | .0    | .0  | 21.4  |         |
| 3-4     | .2  | 9.2  | 22.1  | 1.4   | .0    | .0  | 32.9  |         |
| 5-6     | .2  | 1.7  | 20.9  | 3.0   | .0    | .0  | 25.8  |         |
| 7       | .0  | .5   | 9.8   | 2.3   | .0    | .0  | 12.5  |         |
| 8-9     | .0  | .0   | 2.8   | .9    | .0    | .0  | 3.7   |         |
| 10-11   | .0  | .0   | .2    | .5    | .0    | .0  | .7    |         |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 1.6 | 23.7 | 66.4  | 8.4   | .0    | .0  | 100.0 | 574     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .6  | 5.4 | 10.8 | 8.4  | 5.4  | 1.3 | .1    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 274   | 4        |
| 6-7          | .0  | 1.1 | 7.5  | 10.8 | 6.0  | 2.8 | 1.8   | .7  | .1    | .0    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 263   | 6        |
| 8-9          | .0  | .0  | 2.2  | 4.7  | 4.3  | 2.6 | 1.2   | .4  | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 134   | 6        |
| 10-11        | .0  | .4  | .5   | .7   | 1.2  | 1.6 | .7    | .0  | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 45    | 7        |
| 12-13        | .0  | .0  | .5   | .7   | .2   | .4  | .6    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 20    | 7        |
| >13          | .0  | .0  | .0   | .0   | .4   | .0  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3     | 7        |
| INDET        | .8  | 1.2 | 4.7  | 4.6  | 1.5  | .5  | .1    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 114   | 4        |
| TOTAL        | 12  | 68  | 223  | 255  | 162  | 78  | 38    | 10  | 5     | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 853   | 5        |
| PCT          | 1.4 | 8.0 | 26.1 | 29.9 | 19.0 | 9.1 | 4.5   | 1.2 | .6    | .1    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .0                 | .1        | .0   | .0        | .0   | .0              | .0   | .1                      | .2             | .7        | 4.0         | .0                  | 4.4        | .2              | 90.5       |
| NE       | .0                 | .3        | .0   | .0        | .0   | .0              | .0   | .3                      | *              | .3        | 3.8         | .0                  | 2.5        | .3              | 92.8       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .8        | 9.6         | .0                  | 4.0        | .0              | 85.6       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 2.1         | .0                  | 6.3        | .0              | 91.7       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| TOT PCT  | .0                 | .2        | .0   | .0        | .0   | .0              | .0   | .2                      | .1             | .4        | 4.3         | .0                  | 3.2        | .2              | 91.6       |
| TOT OBS: | 1616               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .6        | 2.2         | .0                  | 2.5        | .3              | 94.5       |
| 06009      | .0                 | .6        | .0   | .0        | .0   | .0              | .0   | .0                      | .2             | .6        | 5.6         | .0                  | 2.5        | .0              | 90.4       |
| 12015      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 2.9         | .0                  | 4.6        | .6              | 91.9       |
| 18021      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .4        | 5.5         | .0                  | 3.5        | .2              | 90.4       |
| TOT PCT    | .0                 | .2        | .0   | .0        | .0   | .0              | .0   | .2                      | .1             | .4        | 4.3         | .0                  | 3.2        | .2              | 91.6       |
| TOT OBS:   | 1645               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | .7                 | 7.9  | 14.3  | 1.6   | *     | .0  |       | 24.6      | 13.0     |          | 35.2       | 14.5  | 24.6  | 26.6  | 35.9  | 18.1  | 25.7  | 21.9  |
| NE       | .9                 | 17.8 | 36.4  | 4.6   | .2    | .0  |       | 59.8      | 13.7     |          | 56.6       | 62.8  | 59.0  | 57.2  | 57.7  | 61.0  | 62.1  | 60.1  |
| E        | .3                 | 3.6  | 7.1   | 1.5   | *     | .0  |       | 12.6      | 14.0     |          | 4.6        | 20.2  | 11.8  | 12.9  | 4.6   | 17.7  | 9.9   | 15.7  |
| SE       | *                  | .4   | .3    | *     | .0    | .0  |       | .8        | 10.0     |          | .6         | 1.2   | .9    | 1.0   | .4    | 1.1   | .5    | .9    |
| S        | *                  | .1   | *     | .0    | .0    | .0  |       | .1        | 7.3      |          | .0         | .1    | .1    | .1    | .0    | .5    | *     | .1    |
| SW       | *                  | .1   | *     | .0    | .0    | .0  |       | .1        | 7.7      |          | .2         | .0    | .2    | .1    | .0    | .2    | .1    | .1    |
| W        | .1                 | .1   | *     | .0    | .0    | .0  |       | .2        | 6.5      |          | .0         | .2    | .4    | .2    | .1    | .3    | .3    | .0    |
| NW       | .1                 | .8   | .5    | .0    | .0    | .0  |       | 1.4       | 8.8      |          | 2.7        | .5    | 2.2   | 1.9   | 1.1   | 1.0   | 1.2   | .8    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | .3                 |      |       |       |       |     |       | .3        | .0       |          | .0         | .4    | .7    | .2    | .2    | .0    | .3    | .3    |
| TOT OBS  | 156                | 1967 | 3743  | 494   | 12    | 0   | 6372  |           | 13.4     |          | 486        | 715   | 1209  | 832   | 503   | 641   | 1121  | 865   |
| TOT PCT  | 2.4                | 30.9 | 58.7  | 7.8   | .2    | .0  | 100.0 |           |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 03    | 06    | 12    |
| N        | 2.7                | 14.8 | 6.9   | .2    | .0  |       |  | 24.6      | 13.0     |          | 22.9       | 25.4  | 26.0  | 24.0  |
| NE       | 4.6                | 35.5 | 19.0  | .7    | .1  |       |  | 59.8      | 13.7     |          | 60.3       | 58.3  | 59.5  | 61.3  |
| E        | 1.4                | 6.1  | 4.7   | .3    | *   |       |  | 12.6      | 14.0     |          | 13.9       | 12.3  | 12.0  | 12.4  |
| SE       | .3                 | .4   | .1    | .0    | .0  |       |  | .8        | 10.0     |          | 1.0        | .9    | .8    | .7    |
| S        | .1                 | .1   | *     | .0    | .0  |       |  | .1        | 7.3      |          | .1         | .1    | .3    | .1    |
| SW       | .1                 | *    | *     | .0    | .0  |       |  | .1        | 7.7      |          | .1         | .1    | .1    | .1    |
| W        | .1                 | .1   | *     | .0    | .0  |       |  | .2        | 6.5      |          | .1         | .3    | .2    | .2    |
| NW       | .6                 | .7   | .1    | .0    | .0  |       |  | 1.4       | 8.8      |          | 1.4        | 2.1   | 1.0   | 1.0   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | .3                 |      |       |       |     |       |  | .3        | .0       |          | .2         | .5    | .1    | .3    |
| TOT OBS  | 648                | 3676 | 1972  | 72    | 4   | 6372  |  |           | 13.4     |          | 1201       | 2041  | 1144  | 1986  |
| TOT PCT  | 10.2               | 57.7 | 30.9  | 1.1   | .1  | 100.0 |  |           |          |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOURL | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 0000  | .2   | 2.8 | 32.2 | 58.2  | 6.3   | .2    | .0  | 13.0  | 100.0    | 1201      |
| 0600  | .5   | 2.4 | 36.2 | 55.2  | 5.6   | .1    | .0  | 12.5  | 100.0    | 2041      |
| 1200  | .1   | 1.6 | 27.3 | 61.2  | 9.5   | .3    | .0  | 14.0  | 100.0    | 1144      |
| 1800  | .3   | 1.7 | 26.7 | 61.3  | 9.8   | .2    | .0  | 14.1  | 100.0    | 1986      |
| TOT   | 20   | 136 | 1967 | 3743  | 494   | 12    | 0   | 13.4  |          | 6372      |
| PCT   | .3   | 2.1 | 30.9 | 58.7  | 7.8   | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 11.7 | 6.2  | 11.6 | 3.7  |           | 4.0              |
| NE       | 19.1 | 13.2 | 19.7 | 8.8  |           | 4.1              |
| E        | 1.5  | .7   | 1.3  | .4   |           | 3.6              |
| SE       | *    | .1   | .3   | .0   |           | 5.2              |
| S        | .0   | .0   | .0   | .0   |           | .0               |
| SW       | .0   | .0   | .0   | .0   |           | .0               |
| W        | .0   | .0   | .0   | .0   |           | .0               |
| NW       | .7   | .2   | .4   | .4   |           | 4.2              |
| VAR      | .0   | .0   | .0   | .0   |           | .0               |
| CALM     | .1   | .0   | .0   | .0   |           | .0               |
| TOT OBS  | 317  | 196  | 320  | 128  | 961       | 4.1              |
| TOT PCT  | 33.0 | 20.4 | 33.3 | 13.3 | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .1  | .0  | .0  | 1.5 | 5.6  | 2.3  | 1.0  | .2   | .2   | .3    | 22.1    |       |
| NE      | .4  | .0  | .4  | 4.1 | 8.1  | 5.3  | 2.8  | .7   | .3   | .4    | 38.3    |       |
| E       | .0  | .0  | .0  | .4  | .4   | .1   | .3   | .1   | .0   | .1    | 2.4     |       |
| SE      | .0  | .0  | .0  | .0  | .0   | .1   | .0   | .2   | .0   | .0    | .1      |       |
| S       | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| SW      | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| W       | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| NW      | .0  | .0  | .0  | .0  | .4   | .2   | .0   | .0   | .0   | *     | 1.1     |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .1      |       |
| TOT OBS | 4   | 0   | 4   | 58  | 139  | 77   | 39   | 11   | 4    | 8     | 617     | 961   |
| TOT PCT | .4  | .0  | .4  | 6.0 | 14.5 | 8.0  | 4.1  | 1.1  | .4   | .8    | 64.2    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .9        | 1.2  | 1.2  | 1.2  | 1.2  | 1.2  | 1.2   | 1.2  |
| >5000          | 1.8       | 2.5  | 2.5  | 2.5  | 2.5  | 2.5  | 2.5   | 2.5  |
| >3500          | 5.2       | 6.6  | 6.6  | 6.6  | 6.6  | 6.6  | 6.6   | 6.6  |
| >2000          | 11.6      | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6  | 14.6 |
| >1000          | 23.5      | 29.0 | 29.0 | 29.0 | 29.0 | 29.0 | 29.0  | 29.0 |
| >600           | 28.6      | 34.9 | 34.9 | 34.9 | 34.9 | 34.9 | 34.9  | 34.9 |
| >300           | 28.7      | 35.4 | 35.4 | 35.4 | 35.4 | 35.4 | 35.4  | 35.4 |
| >150           | 28.7      | 35.4 | 35.4 | 35.4 | 35.4 | 35.4 | 35.4  | 35.4 |
| >0             | 29.0      | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8  | 35.8 |
| TOTAL          | 281       | 347  | 347  | 347  | 347  | 347  | 347   | 347  |

TOTAL NUMBER OF OBS: 970

PCT FREQ NH <5/8: 64.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | Obscd | TOTAL OBS |
|--|------|------|------|------|------|-----|-----|-----|-----|-------|-----------|
|  | 14.5 | 13.8 | 14.1 | 11.3 | 10.1 | 9.6 | 9.7 | 8.6 | 9.3 | .1    | 1017      |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0007 CAPE VERDE ISLANDS  
19.5N 24.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | TOT %  | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .7   | 1.8  | .7  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 3.3   | .0           |
|              | TOT %  | .7   | 1.8  | .7  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 3.3   | .0           |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .4   | .4   | .2  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 1.0   | .0           |
|              | TOT %  | .4   | .4   | .2  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 1.0   | .0           |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2    | .0           |
|              | TOT %  | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2    | .0           |
| 5<10         | PCP    | *    | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2    | .0           |
|              | NO PCP | 11.3 | 22.6 | 4.4 | .3 | .0 | .1 | *  | .6  | .0  | .0   | 39.3  | .0           |
|              | TOT %  | 11.3 | 22.8 | 4.4 | .3 | .0 | .1 | *  | .6  | .0  | .0   | 39.4  | .0           |
| 10+          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | 17.8 | 34.6 | 2.4 | .2 | .0 | .0 | .1 | .9  | .0  | .1   | 56.0  | .0           |
|              | TOT %  | 17.8 | 34.6 | 2.4 | .2 | .0 | .0 | .1 | .9  | .0  | .1   | 56.0  | .0           |
| TOT OBS      |        |      |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |        |      |      |     |    |    |    |    |     |     |      |       |              |
|              |        | 30.4 | 59.6 | 7.7 | .5 | .0 | .1 | .1 | 1.5 | .0  | .1   | 100.0 | 1615         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     | .0           |
|              | 4-10       | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 11-21      | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     | .0           |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    | .0           |
| 1/2<1        | 0-3        | *    | *    | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    | .0           |
|              | 4-10       | .1   | .2   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .4    | .0           |
|              | 11-21      | .2   | .6   | .2  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.0   | .0           |
|              | 22+        | *    | .1   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .2    | .0           |
|              | TOT %      | .4   | .9   | .4  | .0 | .0 | .0 | .0 | *   | .0  | .0   | 1.7   | .0           |
| 1<2          | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .1   | .1   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3    | .0           |
|              | 11-21      | .1   | .2   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3    | .0           |
|              | 22+        | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     | .0           |
|              | TOT %      | .2   | .3   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .7    | .0           |
| 2<5          | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    | .0           |
|              | 4-10       | .3   | .3   | .1  | .0 | .0 | .0 | *  | .1  | .0  | .0   | .8    | .0           |
|              | 11-21      | .4   | .7   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 1.1   | .0           |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     | .0           |
|              | TOT %      | .7   | 1.0  | .1  | *  | .0 | .0 | *  | .1  | .0  | .0   | 1.9   | .0           |
| 5<10         | 0-3        | .2   | .2   | .2  | .0 | .0 | *  | *  | .1  | .0  | *    | .9    | .0           |
|              | 4-10       | 2.7  | 5.3  | 1.1 | .1 | .0 | .0 | *  | .2  | .0  | .0   | 9.6   | .0           |
|              | 11-21      | 5.9  | 10.9 | 1.2 | *  | .0 | .0 | .0 | .2  | .0  | .0   | 18.2  | .0           |
|              | 22+        | .6   | 1.1  | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 1.7   | .0           |
|              | TOT %      | 9.5  | 17.5 | 2.7 | .1 | .0 | *  | *  | .6  | .0  | *    | 30.4  | .0           |
| 10+          | 0-3        | .6   | .8   | .1  | *  | .0 | *  | *  | .1  | .0  | .2   | 1.9   | .0           |
|              | 4-10       | 6.0  | 12.3 | 1.5 | .2 | .0 | *  | *  | .1  | .7  | .0   | 21.0  | .0           |
|              | 11-21      | 11.7 | 25.2 | 1.7 | .1 | .0 | .0 | *  | .4  | .0  | .0   | 39.1  | .0           |
|              | 22+        | 1.0  | 2.2  | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 3.2   | .0           |
|              | TOT %      | 19.3 | 40.5 | 3.4 | .3 | *  | *  | .2 | 1.2 | .0  | .2   | 65.2  | .0           |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            |      |      |     |    |    |    |    |     |     |      |       |              |
|              |            | 30.1 | 60.3 | 6.7 | .5 | *  | .1 | .3 | 1.9 | .0  | .2   | 100.0 | 3108         |



## MAY

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .8         | .0         | .4         | 7.6        | 11.8         | 4.6          | 2.9          | 2.1          | .0           | .0    | 30.3  | 69.7               | 238          |
| 06009         | .0         | .0         | .4         | 7.0        | 16.3         | 7.4          | 5.1          | .8           | 1.6          | 1.2   | 39.7  | 60.3               | 257          |
| 12015         | .4         | .0         | .4         | 5.6        | 13.1         | 9.6          | 4.4          | 1.2          | .0           | .4    | 35.1  | 64.9               | 251          |
| 18021         | .4         | .0         | .4         | 3.2        | 14.5         | 9.6          | 3.6          | .8           | .0           | 1.6   | 34.1  | 65.9               | 249          |
| TOT           | 4          | 0          | 4          | 58         | 139          | 78           | 40           | 12           | 4            | 8     | 347   | 648                | 995          |
| PCT           | .4         | .0         | .4         | 5.8        | 14.0         | 7.8          | 4.0          | 1.2          | .4           | .8    | 34.9  | 65.1               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .9    | .5  | 1.6 | 31.6 | 65.3 | 645          |
| 06009         | .1   | 2.3   | .6  | 2.0 | 32.5 | 62.4 | 929          |
| 12015         | .0   | 1.3   | .8  | 1.7 | 26.2 | 70.0 | 629          |
| 18021         | .0   | 2.1   | .7  | 2.1 | 31.9 | 63.1 | 934          |
| TOT           | 2    | 55    | 21  | 60  | 969  | 2030 | 3137         |
| PCT           | .1   | 1.8   | .7  | 1.9 | 30.9 | 64.7 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .9           | 1.3        | 9.0         | 21.8            | 69.2              | 234          |
| 06009         | .0           | .4         | 8.4         | 33.1            | 58.6              | 251          |
| 12015         | .4           | .8         | 7.0         | 29.8            | 63.2              | 242          |
| 18021         | .4           | .8         | 4.5         | 30.9            | 64.6              | 243          |
| TOT           | 4            | 8          | 70          | 281             | 619               | 970          |
| PCT           | .4           | .8         | 7.2         | 29.0            | 63.8              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 80/84  | .0   | .0    | .1    | .2    | .2    | .5    | .1    | .0     | 11           | 1.1         |
| 75/79  | .0   | .0    | .0    | .0    | 3.2   | 11.2  | 5.4   | 1.6    | 217          | 21.4        |
| 70/74  | .0   | .0    | .0    | .2    | 5.7   | 27.7  | 29.0  | 10.1   | 738          | 72.7        |
| 65/69  | .0   | .0    | .0    | .0    | .0    | 1.7   | 2.5   | .7     | 49           | 4.8         |
| TOTAL  | 0    | 0     | 1     | 4     | 92    | 417   | 375   | 126    | 1015         | 100.0       |
| PCT    | .0   | .0    | .1    | .4    | 9.1   | 41.1  | 36.9  | 12.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| .4   | .4   | .1  | .1 | .0 | .0 | .0 | *   | .0  | .0   |
| 7.5  | 11.8 | 1.5 | .1 | .0 | .0 | .0 | .4  | .0  | .1   |
| 24.7 | 44.2 | 2.5 | .4 | .0 | .0 | .0 | .9  | .0  | .0   |
| 1.3  | 3.1  | .3  | .0 | .0 | .0 | .0 | .1  | .0  | .0   |
| 33.9 | 59.5 | 4.4 | .6 | .0 | .0 | .0 | 1.5 | .0  | .1   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 81  | 76  | 75  | 72  | 68 | 67 | 65  | 71.6 | 1194         |
| 06009         | 84  | 78  | 75  | 72  | 68 | 67 | 64  | 71.8 | 2019         |
| 12015         | 88  | 82  | 80  | 75  | 71 | 70 | 69  | 74.8 | 1087         |
| 18021         | 85  | 81  | 78  | 73  | 70 | 68 | 65  | 73.5 | 1911         |
| TOT           | 88  | 81  | 78  | 73  | 69 | 67 | 64  | 72.8 | 6211         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 3.2   | 32.7  | 45.8  | 18.3   | 82   | 251          |
| 06009         | .0   | .0    | 5.7   | 31.4  | 46.4  | 16.4   | 82   | 280          |
| 12015         | .0   | 1.6   | 16.3  | 52.7  | 22.0  | 7.3    | 76   | 245          |
| 18021         | .0   | .4    | 12.4  | 49.6  | 30.4  | 7.2    | 78   | 250          |
| TOT           | 0    | 5     | 95    | 423   | 375   | 128    | 79   | 1026         |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

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15.5N 24.0W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .1       | .0       | .1       | .1       | 4     | .0       | .3        |
| 7/8                | .0       | .0       | .3       | .3       | .3       | 13    | .0       | .9        |
| 6                  | .0       | .0       | .3       | .7       | .2       | 17    | .0       | 1.1       |
| 5                  | .0       | .1       | .5       | .7       | .1       | 22    | .1       | 1.4       |
| 4                  | .0       | .1       | 1.1      | 1.0      | .0       | 33    | .0       | 2.2       |
| 3                  | .0       | .1       | 1.5      | .9       | .0       | 38    | .0       | 2.5       |
| 2                  | .0       | .8       | 4.1      | 1.3      | .0       | 93    | .2       | 6.0       |
| 1                  | .0       | 2.4      | 8.4      | .9       | .1       | 176   | .6       | 11.2      |
| 0                  | .1       | 6.5      | 12.2     | .7       | .0       | 291   | 1.1      | 18.4      |
| -1                 | .0       | 12.5     | 11.0     | .2       | .0       | 354   | .8       | 22.9      |
| -2                 | .1       | 9.2      | 5.0      | .1       | .0       | 216   | .7       | 13.8      |
| -3                 | .3       | 6.0      | 2.1      | .1       | .0       | 126   | .4       | 8.0       |
| -4                 | .2       | 2.8      | .8       | .1       | .0       | 58    | .1       | 3.8       |
| -5                 | .2       | 1.3      | .5       | .1       | .0       | 31    | .0       | 2.1       |
| -6                 | .0       | .7       | .1       | .0       | .0       | 13    | .0       | .9        |
| -7/-8              | .1       | .3       | .1       | .0       | .0       | 7     | .0       | .5        |
| -11/-13            | .0       | .1       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 14       | 646      | 717      | 106      | 10       | 1493  | 59       | 1434      |
| PCT                | .9       | 43.3     | 48.0     | 7.1      | .7       | 100.0 | 4.0      | 96.0      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .5   | .3    | .0    | .0    | .0  | .8   | .4  | .6   | .*    | .0    | .0    | .0  | 1.0  |
| 1-2     | .4  | 3.0  | 3.8   | .0    | .0    | .0  | 7.2  | .*  | 7.0  | 5.4   | .0    | .0    | .0  | 12.5 |
| 3-4     | .0  | 3.7  | 7.9   | .5    | .0    | .0  | 12.0 | .0  | 7.5  | 14.5  | 1.1   | .0    | .0  | 23.2 |
| 5-6     | .0  | 1.2  | 8.5   | .5    | .0    | .0  | 10.2 | .0  | .9   | 14.0  | .9    | .4    | .0  | 16.2 |
| 7       | .0  | .2   | 2.0   | .2    | .0    | .0  | 2.3  | .0  | .4   | 3.8   | .7    | .2    | .0  | 5.0  |
| 8-9     | .0  | .0   | .8    | .5    | .0    | .0  | 1.3  | .0  | .0   | .8    | .8    | .0    | .0  | 1.6  |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .3   | .0  | .0   | .4    | .2    | .0    | .0  | .6   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .4  | 8.6  | 23.4  | 1.8   | .0    | .0  | 34.2 | .4  | 16.4 | 38.9  | 3.7   | .5    | .0  | 60.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .1  | .6   | .7    | .0    | .0    | .0  | 1.4 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .2   | 1.2   | .0    | .0    | .0  | 1.4 | .0  | .0   | .*    | .0    | .0    | .0  | .*  |
| 5-6     | .0  | .0   | .4    | .0    | .0    | .0  | .4  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 1.1  | 2.5   | .1    | .0    | .0  | 3.8 | .0  | .0   | .*    | .0    | .0    | .0  | .*  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .2   | .3    | .0    | .0    | .0  | .4  | .0        |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .2   | .6    | .0    | .0    | .0  | .8  | .0        |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0        |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .4   | 1.1   | .0    | .0    | .0  | 1.5 | 99.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | .5  | 1.4  | .4    | .0    | .0    | .0  | 2.3   |         |
| 1-2     | .5  | 10.9 | 10.2  | .0    | .0    | .0  | 21.6  |         |
| 3-4     | .0  | 11.6 | 24.2  | 1.6   | .0    | .0  | 37.4  |         |
| 5-6     | .0  | 2.1  | 23.2  | 1.4   | .4    | .0  | 27.1  |         |
| 7       | .0  | .5   | 6.1   | .9    | .2    | .0  | 7.7   |         |
| 8-9     | .0  | .0   | 1.6   | 1.4   | .0    | .0  | 3.0   |         |
| 10-11   | .0  | .0   | .5    | .4    | .0    | .0  | .9    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 1.1 | 26.6 | 66.1  | 5.7   | .5    | .0  | 100.0 | 561     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD<br>(SEC) | <1 | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN<br>HGT |   |
|-----------------|----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------------|---|
| <6              | .6 | 7.4  | 13.1 | 10.4 | 4.1  | 1.7 | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 292         | 4 |
| 6-7             | .0 | .5   | 9.9  | 13.7 | 6.3  | 2.3 | .6    | .4 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 263         | 5 |
| 8-9             | .0 | .5   | 1.8  | 5.1  | 3.2  | 1.5 | .5    | .0 | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 102         | 6 |
| 10-11           | .0 | .3   | .5   | .9   | .3   | .3  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 19          | 5 |
| 12-13           | .0 | .0   | .5   | .0   | .1   | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 6           | 5 |
| >13             | .0 | .0   | .0   | .1   | .0   | .0  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 3           | 8 |
| INDET           | .3 | 2.2  | 3.7  | 2.8  | 2.3  | .5  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 94          | 4 |
| TOTAL           | 7  | 85   | 230  | 258  | 127  | 40  | 16    | 3  | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 779         | 9 |
| PCT             | .9 | 10.9 | 29.5 | 33.1 | 16.3 | 6.4 | 2.1   | .4 | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0       |   |



PERIOD: (PRIMARY) 1897-1973  
(OVER-ALL) 1894-1973

JUNE

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHMK | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FUG WD PCPN | FUG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | .0        | .4   | .0        | .0   | .0              | .0   | .5                      | .0             | .0        | 4.5         | .0                  | 4.4        | .7              | 89.9       |
| NE       | .1                 | .2        | .4   | .0        | .0   | .0              | .0   | .7                      | .0             | .1        | 5.9         | .0                  | 3.2        | 1.1             | 89.0       |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 9.9         | .0                  | 2.2        | .5              | 87.3       |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 18.2        | .0                  | .0         | .0              | 81.8       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| NW       | 1.6                | .0        | .0   | .0        | .0   | .0              | .0   | 1.6                     | .0             | .0        | 4.8         | .0                  | .0         | .0              | 93.5       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | 100.0      |
| TOT PCT  | .1                 | .1        | .3   | .0        | .0   | .0              | .0   | .6                      | .0             | .1        | 5.9         | .0                  | 3.3        | .9              | 89.3       |
| TOT OBS: | 1570               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                    |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|--------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FUG<br>WD<br>PCPN | FUG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG<br>WEA |
| 00003         | .0                 | .0           | .0   | .0           | .0   | .0                    | .0   | .0                 | .0                      | .0           | 5.1               | .0                        | 3.4           | .6                 | 90.9             |
| 06009         | .0                 | .2           | .9   | .0           | .0   | .0                    | .0   | 1.2                | .0                      | .0           | 6.7               | .0                        | 1.8           | .0                 | 90.3             |
| 12015         | .3                 | .0           | .3   | .0           | .0   | .0                    | .0   | .6                 | .0                      | .3           | 5.6               | .0                        | 3.7           | 1.4                | 88.4             |
| 18021         | .2                 | .2           | .0   | .0           | .0   | .0                    | .0   | .4                 | .0                      | .0           | 6.4               | .0                        | 4.2           | 1.5                | 87.4             |
| TOT PCT       | .1                 | .1           | .3   | .0           | .0   | .0                    | .0   | .6                 | .0                      | .1           | 6.0               | .0                        | 3.3           | .9                 | 89.2             |
| TOT OBS:      | 1593               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                    |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |  |
|----------|--------------------|------|-------|-------|-------|----|------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |  |
| N        | .7                 | 8.8  | 11.5  | 1.2   | *     | .0 |      | 22.2  | 12.1         | 31.4        | 15.2        | 25.1       | 22.5  | 33.9  | 14.5  | 21.1  | 18.3  |  |
| NE       | 1.1                | 21.4 | 34.9  | 3.7   | .1    | .0 |      | 61.1  | 12.9         | 60.2        | 62.0        | 58.0       | 60.0  | 58.3  | 63.3  | 64.0  | 62.7  |  |
| E        | .5                 | 4.3  | 6.7   | 1.1   | .1    | .0 |      | 12.6  | 13.1         | 4.1         | 18.3        | 12.0       | 13.2  | 2.8   | 18.1  | 12.0  | 15.6  |  |
| SE       | .1                 | .6   | .4    | .1    | .0    | .0 |      | 1.1   | 10.2         | .2          | 1.9         | 1.2        | 1.2   | .7    | 1.8   | .9    | 1.0   |  |
| S        | .1                 | *    | *     | .0    | .0    | .0 |      | .1    | 4.8          | .3          | .2          | .1         | .1    | .1    | .0    | .2    | .1    |  |
| SW       | *                  | .2   | *     | .0    | .0    | .0 |      | .3    | 6.4          | .7          | .3          | .1         | .3    | .6    | .5    | .1    | .1    |  |
| W        | .1                 | .2   | .0    | .0    | .0    | .0 |      | .3    | 5.3          | .5          | .3          | .6         | .3    | .0    | .3    | .1    | .2    |  |
| NW       | .2                 | .7   | .4    | *     | .0    | .0 |      | 1.4   | 9.4          | 2.0         | .9          | 1.7        | 1.3   | 2.9   | .7    | .9    | 1.4   |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | .8                 |      |       |       |       |    |      | .8    | .0           | .6          | .9          | 1.2        | 1.0   | .8    | .8    | .7    | .5    |  |
| TOT OBS  | 216                | 2224 | 3309  | 373   | 12    | 0  | 6134 |       | 12.5         | 485         | 672         | 1147       | 804   | 499   | 613   | 1054  | 860   |  |
| TOT PCT  | 3.5                | 36.3 | 53.9  | 6.1   | .2    | .0 |      | 100.0 |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 06    | 12    | 18 |
| N        | 2.9                | 14.4 | 4.7   | .1    | .0  | 22.2      | 12.1     | 22.0     | 24.0       | 23.2  | 19.9  |    |
| NE       | 6.3                | 37.5 | 16.7  | .5    | .1  | 61.1      | 12.9     | 61.2     | 58.8       | 61.0  | 63.4  |    |
| E        | 1.7                | 6.9  | 3.7   | .3    | *   | 12.6      | 13.1     | 12.4     | 12.5       | 11.2  | 13.7  |    |
| SE       | .4                 | .6   | .2    | .0    | .0  | 1.1       | 10.2     | 1.2      | 1.2        | 1.3   | .9    |    |
| S        | .1                 | *    | .0    | .0    | .0  | .1        | 4.8      | .3       | .1         | *     | .2    |    |
| SW       | .2                 | .1   | .0    | .0    | .0  | .3        | 6.4      | .5       | .2         | .5    | .1    |    |
| W        | .2                 | .1   | .0    | .0    | .0  | .3        | 5.3      | .4       | .5         | .2    | .2    |    |
| NW       | .5                 | .6   | .2    | .0    | .0  | 1.4       | 9.4      | 1.3      | 1.5        | 1.7   | 1.1   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       | .0       | .0         | .0    | .0    |    |
| CALM     | .8                 |      |       |       |     | .8        | .0       | .8       | 1.1        | .8    | .6    |    |
| TOT OBS  | 809                | 3696 | 1369  | 54    | 6   | 6134      | 12.5     | 1157     | 1951       | 1112  | 1914  |    |
| TOT PCT  | 13.2               | 60.3 | 25.6  | .9    | .1  |           | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1897-1973  
(OVER-ALL) 1854-1973

JUNE

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003 | .8   | 2.5 | 40.0 | 51.7  | 4.8   | .2    | .0  | 12.1 | 100.0    | 1157      |
| 06009 | 1.1  | 3.4 | 38.4 | 51.2  | 5.7   | .2    | .0  | 12.1 | 100.0    | 1951      |
| 12015 | .8   | 1.6 | 36.0 | 54.5  | 6.8   | .3    | .0  | 12.8 | 100.0    | 1112      |
| 18021 | .6   | 2.7 | 32.0 | 57.8  | 6.8   | .2    | .0  | 13.1 | 100.0    | 1914      |
| TOT   | 51   | 165 | 2224 | 3304  | 373   | 12    | 0   | 12.5 |          | 6134      |
| PCT   | .8   | 2.7 | 36.3 | 53.9  | 6.1   | .2    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 7.8  | 5.8  | 9.8  | 5.8          |              | 4.5                    |
| NE       | 16.6 | 13.0 | 21.4 | 11.2         |              | 4.5                    |
| E        | 1.9  | 1.0  | 1.0  | .9           |              | 3.9                    |
| SE       | .3   | .0   | .0   | .0           |              | 1.0                    |
| S        | .1   | .1   | .0   | .1           |              | 4.3                    |
| SW       | .1   | .1   | .0   | *            |              | 2.7                    |
| W        | .1   | .0   | .0   | .0           |              | .0                     |
| NW       | .9   | .6   | .7   | .3           |              | 4.0                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .2   | .0   | .1   | .0           |              | 2.6                    |
| TOT OBS  | 255  | 188  | 300  | 166          | 909          | 4.4                    |
| TOT PCT  | 28.1 | 20.7 | 33.0 | 18.3         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT.) NH >4/8  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .2         | .0         | .2         | 1.7        | 4.3          | 2.9          | 1.7          | .4           | .1           | .4    | 17.3               |              |
| NE      | .2         | .1         | .6         | 2.8        | 10.3         | 5.8          | 3.2          | 1.6          | .2           | .6    | 36.9               |              |
| E       | .0         | .0         | .0         | .5         | .6           | .0           | .3           | .1           | .0           | .0    | 3.4                |              |
| SE      | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .3                 |              |
| S       | .0         | .0         | .0         | .0         | .1           | .0           | .0           | .0           | .0           | .0    | .1                 |              |
| SW      | .0         | .0         | .0         | .0         | *            | .0           | .0           | .0           | .0           | .0    | .2                 |              |
| W       | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .1                 |              |
| NW      | .0         | .0         | *          | .1         | .3           | .1           | .1           | .0           | .0           | .0    | 1.9                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .3                 |              |
| TOT OBS | 3          | 1          | 8          | 47         | 142          | 80           | 47           | 19           | 3            | 9     | 550                | 909          |
| TOT PCT | .3         | .1         | .9         | 5.2        | 15.6         | 8.8          | 5.2          | 2.1          | .3           | 1.0   | 60.5               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.3        | 1.3        | 1.3        | 1.3          | 1.3          | 1.3           | 1.3        |
| = OR >5000        | 2.6         | 3.4        | 3.5        | 3.5        | 3.5          | 3.5          | 3.5           | 3.5        |
| = OR >3500        | 6.9         | 8.7        | 8.8        | 8.8        | 8.8          | 8.8          | 8.8           | 8.8        |
| = OR >2000        | 14.0        | 17.4       | 17.6       | 17.6       | 17.6         | 17.6         | 17.6          | 17.6       |
| = OR >1000        | 26.2        | 33.0       | 33.2       | 33.2       | 33.2         | 33.2         | 33.2          | 33.2       |
| = OR >600         | 29.6        | 37.8       | 38.1       | 38.1       | 38.1         | 38.1         | 38.1          | 38.1       |
| = OR >300         | 30.1        | 38.8       | 39.2       | 39.2       | 39.2         | 39.2         | 39.2          | 39.2       |
| = OR >150         | 30.2        | 38.9       | 39.3       | 39.3       | 39.3         | 39.3         | 39.3          | 39.3       |
| = OR >0           | 30.2        | 39.0       | 39.6       | 39.6       | 39.7         | 39.7         | 39.7          | 39.7       |
| TOTAL             | 275         | 355        | 360        | 360        | 360          | 361          | 361           | 361        |

TOTAL NUMBER OF OBS: 910

PCT FREQ NH <5/8: 60.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBSCD | TOTAL<br>OBS |
|------|------|------|------|------|-----|-----|-----|------|-------|--------------|
| 13.0 | 10.6 | 13.1 | 12.0 | 10.9 | 7.6 | 8.9 | 9.7 | 13.9 | .3    | 970          |

PERIOD: (PRIMARY) 1897-1973  
(OVER-ALL) 1854-1973

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15.5N 23.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE | S    | SW | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|----|------|----|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | * *  | .0   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .1           |
|              | TOT %  | * *  | .0   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .1           |
| 1/2<1        | PCP    | .0   | .1   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .1           |
|              | NO PCP | .4   | 2.2  | .7   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | 3.3          |
|              | TOT %  | .4   | 2.3  | .7   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | 3.4          |
| 1<2          | PCP    | .0   | .0   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .3   | .7   | * .0 | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | 1.0          |
|              | TOT %  | .3   | .7   | * .0 | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | 1.0          |
| 2<5          | PCP    | * .0 | .0   | .0   | .0 | .0   | .0 | * .0 | .0   | .0  | .0   | .0    | .1           |
|              | NO PCP | .3   | .4   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .6           |
|              | TOT %  | .3   | .4   | .0   | .0 | .0   | .0 | .0   | * .0 | .0  | .0   | .0    | .7           |
| 5<10         | PCP    | * .4 | .0   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .4           |
|              | NO PCP | 8.3  | 24.4 | 6.2  | .5 | .2   | .3 | .1   | .5   | .0  | .2   | .2    | 40.7         |
|              | TOT %  | 8.3  | 24.7 | 6.2  | .5 | .2   | .3 | .1   | .5   | .0  | .2   | .2    | 41.0         |
| 10+          | PCP    | .1   | .0   | .0   | .0 | .0   | .0 | .0   | .0   | .0  | .0   | .0    | .1           |
|              | NO PCP | 16.0 | 33.4 | 2.3  | .4 | * .1 | .1 | 1.4  | .0   | .1  | .1   | .1    | 53.7         |
|              | TOT %  | 16.1 | 33.4 | 2.3  | .4 | * .1 | .1 | 1.4  | .0   | .1  | .1   | .1    | 53.8         |
| TOT OBS      |        | 25.4 | 61.4 | 9.3  | .8 | .3   | .4 | .1   | 2.0  | .0  | .3   | 100.0 | 1569         |
| TOT PCT      |        |      |      |      |    |      |    |      |      |     |      |       |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE | S    | SW   | W    | NW   | VAR  | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|----|------|------|------|------|------|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    |              |
|              | 4-10       | .0   | * .0 | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | *            |
|              | 11-21      | * *  | .0   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .1           |
|              | 22+        | .0   | .0   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | TOT %      | * .1 | .0   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .1           |
| 1/2<1        | 0-3        | .1   | * .0 | .0   | .0 | .0   | .0   | * .0 | .0   | .0   | .0   | .0    | .1           |
|              | 4-10       | * .4 | .1   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .6           |
|              | 11-21      | .1   | .8   | .2   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 1.1          |
|              | 22+        | .0   | .0   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .0           |
|              | TOT %      | .2   | 1.2  | .4   | .0 | .0   | .0   | .0   | * .0 | .0   | .0   | .0    | 1.8          |
| 1<2          | 0-3        | * *  | .0   | .0   | .0 | .0   | * .0 | * .0 | .0   | .0   | .0   | .0    | .1           |
|              | 4-10       | .1   | .2   | * .0 | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .3           |
|              | 11-21      | .1   | .3   | * .0 | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .4           |
|              | 22+        | * *  | .0   | .0   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .1           |
|              | TOT %      | .2   | .5   | * .0 | .0 | .0   | * .0 | * .0 | .0   | .0   | .0   | .0    | .8           |
| 2<5          | 0-3        | .1   | .1   | .1   | .0 | .0   | .0   | .0   | .0   | .0   | .1   | .1    | .4           |
|              | 4-10       | .2   | .6   | .1   | .0 | .0   | .0   | .0   | .0   | * .0 | .0   | .0    | .9           |
|              | 11-21      | .4   | .9   | .1   | .0 | .0   | .0   | .0   | .0   | * .0 | .0   | .0    | 1.4          |
|              | 22+        | .1   | .1   | * .0 | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | .2           |
|              | TOT %      | .7   | 1.7  | .3   | .0 | .0   | .0   | .0   | * .0 | .0   | .1   | .1    | 2.8          |
| 5<10         | 0-3        | .4   | .3   | .1   | .0 | * .1 | .0   | .1   | .0   | .0   | .3   | .3    | 1.3          |
|              | 4-10       | 3.2  | 8.2  | 2.1  | .3 | * .1 | .1   | .3   | .0   | .0   | .0   | .0    | 14.4         |
|              | 11-21      | 4.4  | 11.9 | 1.7  | .1 | * .0 | .0   | .2   | .0   | .0   | .0   | .0    | 18.3         |
|              | 22+        | .4   | 1.1  | .1   | .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0    | 1.7          |
|              | TOT %      | 8.5  | 21.6 | 4.0  | .4 | .1   | .2   | .1   | .5   | .0   | .3   | .3    | 35.7         |
| 10+          | 0-3        | .3   | .7   | .2   | .0 | .0   | .1   | .2   | .0   | .0   | .2   | .2    | 1.6          |
|              | 4-10       | 6.4  | 15.1 | 2.6  | .2 | * .1 | .1   | .6   | .0   | .0   | .0   | .0    | 24.6         |
|              | 11-21      | 8.4  | 20.4 | 1.3  | .1 | .0   | .0   | .4   | .0   | .0   | .0   | .0    | 30.6         |
|              | 22+        | .7   | 1.1  | * .0 | .0 | .0   | .0   | .1   | .0   | .0   | .0   | .0    | 1.9          |
|              | TOT %      | 15.8 | 37.2 | 3.6  | .4 | * .1 | .2   | 1.2  | .0   | .0   | .2   | .2    | 58.8         |
| TOT OBS      |            | 25.5 | 62.3 | 8.3  | .8 | .2   | .4   | .3   | 1.8  | .0   | .6   | 100.0 | 3096         |
| TOT PCT      |            |      |      |      |    |      |      |      |      |      |      |       |              |



PERIOD: (PRIMARY) 1897-1973  
(OVER-ALL) 1854-1973

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15.5N 23.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|---------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                     |              |
| 00003 | .9  | .0  | 1.4 | 4.1 | 12.7 | 5.5  | 4.1  | 2.3  | .0   | .9    | 31.8  | 68.2                | 220          |
| 06009 | .0  | .5  | .9  | 7.0 | 18.7 | 7.9  | 5.1  | 4.2  | .5   | .5    | 45.3  | 54.7                | 214          |
| 12015 | .4  | .0  | 1.9 | 4.6 | 13.4 | 14.1 | 7.3  | 1.1  | .4   | 1.9   | 45.0  | 55.0                | 262          |
| 18021 | .0  | .0  | .0  | 4.5 | 15.9 | 5.7  | 3.7  | 1.2  | .4   | .4    | 31.8  | 68.2                | 245          |
| TOT   | 3   | 1   | 10  | 47  | 142  | 80   | 48   | 20   | 3    | 9     | 363   | 578                 | 941          |
| PCT   | .3  | .1  | 1.1 | 5.0 | 15.1 | 8.5  | 5.1  | 2.1  | .3   | 1.0   | 38.6  | 61.4                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSRY (NH) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL |
|-------|------|-------|-----|-----|------|------|-------|
| (GMT) |      |       |     |     |      |      | OBS   |
| 00003 | .2   | 1.3   | .8  | 3.0 | 34.1 | 60.8 | 640   |
| 06009 | .2   | 2.2   | .8  | 2.5 | 38.5 | 55.8 | 914   |
| 12015 | .0   | 2.1   | .5  | 2.4 | 30.0 | 65.0 | 623   |
| 18021 | .0   | 1.8   | 1.0 | 3.2 | 38.9 | 55.1 | 943   |
| TOT   | 3    | 56    | 24  | 87  | 1124 | 1824 | 3120  |
| PCT   | .1   | 1.9   | .8  | 2.8 | 36.0 | 58.5 | 100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSRY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8), BY HOUR

| HR    | <150  | <600 | <1000 | 1000+  | NH < 5/8 | TOTAL |
|-------|-------|------|-------|--------|----------|-------|
| (GMT) | <50YD | <1   | <5    | AND 5+ | AND 5+   | OBS   |
| 00003 | 1.0   | 2.4  | 6.8   | 27.1   | 66.2     | 207   |
| 06009 | .0    | 1.5  | 9.3   | 38.7   | 52.0     | 204   |
| 12015 | .4    | 2.3  | 7.8   | 38.0   | 54.3     | 258   |
| 18021 | .0    | .0   | 5.0   | 27.8   | 67.2     | 241   |
| TOT   | 3     | 14   | 65    | 300    | 545      | 910   |
| PCT   | .3    | 1.5  | 7.1   | 33.0   | 59.9     | 100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL | PCT   |
|--------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
|        |      |       |       |       |       |       |       |        | OBS   | FREQ  |
| 85/89  | .0   | .0    | .0    | .0    | .1    | .1    | .0    | .0     | 2     | .2    |
| 80/84  | .0   | .0    | .0    | .2    | .9    | 1.7   | .2    | .1     | 32    | 3.1   |
| 75/79  | .0   | .0    | .0    | .2    | 1.5   | 18.0  | 15.2  | 3.3    | 397   | 38.2  |
| 70/74  | .0   | .0    | .0    | .0    | 1.5   | 16.5  | 28.9  | 11.2   | 603   | 58.0  |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .1    | .3    | .1     | 5     | .5    |
| TOTAL  | 0    | 0     | 0     | 4     | 42    | 378   | 463   | 152    | 1039  | 100.0 |
| PCT    | .0   | .0    | .0    | .4    | 4.0   | 36.4  | 44.6  | 14.6   |       |       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
|      |      |     |    |    |    |    |     |     |      |
| *    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 1.0  | 1.0  | .2  | .1 | .0 | .0 | .0 | .1  | .0  | .1   |
| 10.9 | 24.6 | 1.3 | .3 | .0 | .2 | .1 | .8  | .0  | .1   |
| 17.8 | 34.8 | 3.3 | .2 | .1 | *  | .1 | 1.4 | .0  | .2   |
| .0   | .5   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 29.8 | 61.6 | 4.8 | .6 | .1 | .2 | .2 | 2.3 | .0  | .4   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL |
|-------|-----|-----|-----|-----|----|----|-----|------|-------|
| (GMT) |     |     |     |     |    |    |     |      | OBS   |
| 00003 | 85  | 77  | 76  | 73  | 70 | 69 | 64  | 73.1 | 1144  |
| 06009 | 86  | 79  | 77  | 73  | 70 | 69 | 65  | 73.2 | 1911  |
| 12015 | 88  | 84  | 81  | 76  | 73 | 71 | 68  | 76.1 | 1067  |
| 18021 | 90  | 82  | 80  | 75  | 71 | 70 | 68  | 75.0 | 1857  |
| TOT   | 90  | 82  | 79  | 74  | 71 | 69 | 64  | 74.2 | 5979  |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL |
|-------|------|-------|-------|-------|-------|--------|------|-------|
| (GMT) |      |       |       |       |       |        |      | OBS   |
| 00003 | .0   | .0    | .8    | 22.7  | 56.3  | 20.3   | 84   | 256   |
| 06009 | .0   | .0    | 1.2   | 25.8  | 52.8  | 20.2   | 83   | 252   |
| 12015 | .0   | .8    | 10.2  | 52.9  | 26.7  | 9.4    | 78   | 255   |
| 18021 | .0   | .7    | 3.9   | 42.7  | 43.4  | 9.3    | 80   | 281   |
| TOT   | 0    | 4     | 42    | 378   | 467   | 153    | 81   | 1044  |

PERIOD: (PRIMARY) 1897-1973  
(OVER-ALL) 1854-1973

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15.5N 23.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 49<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | N<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .1       | .1       | 2     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .2       | .1       | 4     | .1       | .2        |
| 7/8                | .0       | .0       | .1       | .3       | .1       | 6     | .0       | .4        |
| 6                  | .0       | .1       | .3       | .1       | .0       | 7     | .0       | .5        |
| 5                  | .0       | .3       | 1.0      | .1       | .0       | 21    | .1       | 1.4       |
| 4                  | .1       | .6       | 1.5      | .3       | .0       | 36    | .1       | 2.3       |
| 3                  | .2       | 1.6      | 1.7      | .3       | .0       | 56    | .3       | 3.6       |
| 2                  | .1       | 4.6      | 2.7      | .1       | .0       | 110   | .5       | 7.0       |
| 1                  | 1.0      | 8.7      | 3.6      | .0       | .0       | 194   | .8       | 12.4      |
| 0                  | 2.6      | 18.3     | 2.1      | .1       | .0       | 338   | 1.0      | 22.1      |
| -1                 | 4.1      | 16.3     | .3       | .1       | .0       | 304   | 1.6      | 19.1      |
| -2                 | 4.6      | 9.2      | .8       | .0       | .0       | 212   | .7       | 13.8      |
| -3                 | 2.3      | 3.3      | .2       | .0       | .0       | 85    | .4       | 5.4       |
| -4                 | 1.0      | 1.6      | .0       | .0       | .0       | 38    | .1       | 2.5       |
| -5                 | 1.0      | .8       | .0       | .0       | .0       | 26    | .0       | 1.8       |
| -6                 | .3       | .8       | .0       | .0       | .0       | 17    | .0       | 1.2       |
| -7/-8              | .2       | .2       | .0       | .0       | .0       | 6     | .0       | .4        |
| -9/-10             | .0       | .1       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 256      | 973      | 208      | 23       | 3        | 1463  | 84       | 1379      |
| PCT                | 17.5     | 66.5     | 14.2     | 1.6      | .2       | 100.0 | 5.7      | 94.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3   | .2  | .7   | .0    | .0    | .0    | .0  | .9   |
| 1-2     | .0  | 7.4  | 2.4   | .0    | .0    | .0  | 9.8  | .0  | 11.6 | 5.5   | .0    | .0    | .0  | 17.2 |
| 3-4     | .1  | 3.9  | 7.6   | .2    | .0    | .0  | 11.8 | .0  | 6.7  | 15.8  | .0    | .0    | .0  | 22.6 |
| 5-6     | .0  | .9   | 4.6   | .7    | .0    | .0  | 6.2  | .0  | 2.2  | 10.9  | 1.0   | .0    | .0  | 14.1 |
| 7       | .0  | .1   | 2.0   | .1    | .1    | .0  | 2.4  | .2  | .7   | 3.2   | 1.3   | .1    | .0  | 5.4  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .2    | .4    | .0    | .0  | .6   |
| 10-11   | .0  | .0   | .0    | .5    | .0    | .0  | .5   | .0  | .0   | .0    | .4    | .0    | .0  | .4   |
| 12      | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .3  | 12.5 | 16.8  | 1.5   | .1    | .0  | 31.3 | .4  | 22.1 | 35.7  | 3.0   | .1    | .0  | 61.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | 1.2  | .1    | .0    | .0    | .0  | 1.4 | .0  | .2   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .3   | .7    | .0    | .0    | .0  | 1.1 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .2   | 1.4   | .0    | .0    | .0  | 1.6 | .0  | .0   | .0    | .2    | .0    | .0  | .2  |
| 7       | .0  | .0   | .0    | .0    | .1    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | 1.7  | 2.3   | .0    | .1    | .0  | 4.2 | .0  | .2   | .0    | .2    | .0    | .0  | .4  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .2   | .0    | .0    | .0    | .0  | .0  | .2  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .2   | .0    | .0    | .0    | .0  | .0  | .2  |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .4  | .0   | .0    | .0    | .0    | .0  | .4  | .4   |           |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .2  | .4   | .2    | .0    | .0    | .0  | .7  | .7   |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .2  | .2   | .4    | .2    | .0    | .0  | 1.0 | 1.0  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .1   |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .1   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .7  | .6   | .8    | .2    | .0    | .0  | 2.3 | 99.6 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.0 | 1.2  | .0    | .0    | .0    | .0  | .0    | 2.3     |
| 1-2     | .2  | 20.8 | 8.2   | .0    | .0    | .0  | .0    | 29.1    |
| 3-4     | .3  | 11.3 | 24.4  | .3    | .0    | .0  | .0    | 36.5    |
| 5-6     | .0  | 3.3  | 16.9  | 1.9   | .0    | .0  | .0    | 22.2    |
| 7       | .2  | .9   | 5.2   | 1.4   | .3    | .0  | .0    | 8.0     |
| 8-9     | .0  | .0   | .3    | .3    | .0    | .0  | .0    | .7      |
| 10-11   | .0  | .0   | .0    | .9    | .0    | .0  | .0    | .9      |
| 12      | .0  | .0   | .2    | .0    | .0    | .0  | .0    | .2      |
| 13-16   | .0  | .0   | .2    | .0    | .0    | .0  | .0    | .2      |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    | .0      |
| TOT PCT | 1.7 | 37.5 | 55.5  | 4.9   | .3    | .0  | 100.0 | 573     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .6  | 9.2  | 15.5 | 10.8 | 3.7  | .6  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 327   | 4        |
| 6-7          | .0  | 1.0  | 10.7 | 13.3 | 5.8  | 1.2 | 1.2   | .0 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 275   | 5        |
| 8-9          | .0  | .2   | 1.2  | 3.0  | 2.1  | 1.9 | .1    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 70    | 6        |
| 10-11        | .0  | .2   | .4   | 1.5  | 1.0  | .5  | .1    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 31    | 6        |
| 12-13        | .0  | .0   | .1   | .1   | .2   | .2  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 7     | 7        |
| >13          | .0  | .0   | .0   | .1   | .0   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1     | 5        |
| INDET        | .5  | 3.6  | 3.9  | 2.4  | 1.2  | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 93    | 3        |
| TOTAL        | 9   | 115  | 256  | 251  | 114  | 36  | 14    | 7  | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 804   | 4        |
| PCT          | 1.1 | 14.3 | 31.8 | 31.2 | 14.2 | 4.5 | 1.7   | .9 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

JULY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                           |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|---------------------------|------------|--|
| WIND DIR           | RAIN | RAIN SHMK | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST BLWG SNOW | NO SIG WEA |  |
| N                  | .1   |           | .4   | .0        | .0   | .0              | .0   | .9              | .4             | .0                      | 2.0         | .0                  | 2.9        |                           | 93.2       |  |
| NE                 | .4   | .7        | .1   | .0        | .0   | .0              | .0   | 1.2             | .1             | .0                      | 3.2         | .0                  | 1.7        | .1                        | 93.8       |  |
| E                  | .0   | 3.4       | .0   | .0        | .0   | .0              | .0   | 3.4             | .5             | .0                      | 6.0         | .0                  | 2.6        | .5                        | 86.9       |  |
| SE                 | 2.5  | 1.9       | 2.5  | .0        | .0   | .0              | .0   | 6.9             | .0             | .0                      | 2.5         | .0                  | 5.0        | .0                        | 85.5       |  |
| S                  | .0   | 6.0       | .0   | .0        | .0   | .0              | .0   | 6.0             | .0             | .0                      | .0          | .0                  | .0         | .0                        | 94.0       |  |
| SW                 | .0   | 11.1      | .0   | .0        | .0   | .0              | .0   | 11.1            | .0             | .0                      | .0          | .0                  | .0         | .0                        | 88.9       |  |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 7.7         | .0                  | 5.8        | .0                        | 86.5       |  |
| NW                 | .8   | .0        | .0   | .0        | .0   | .0              | .0   | .8              | .4             | .0                      | 1.6         | .0                  | 7.1        | .8                        | 89.4       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                        | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | 5.3        | 5.3                       | 89.5       |  |
| TOT PCT            | .3   | 1.1       | .2   | .0        | .0   | .0              | .0   | 1.6             | .3             | .0                      | 3.0         | .0                  | 2.5        | .4                        | 92.2       |  |
| TOT OBS:           | 1541 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                           |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                                       |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|---------------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST<br>BLWG<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .3                 | 2.2          | .0   | .0           | .0   | .0                    | .0   | 2.4                     | .5                | .0           | 1.6               | .0                        | 2.2           | .3                                    | 93.0             |
| 06009         | .5                 | 2.1          | .5   | .0           | .0   | .0                    | .0   | 3.0                     | .0                | .0           | 4.6               | .0                        | 1.8           | .2                                    | 90.3             |
| 12015         | .8                 | .5           | .3   | .0           | .0   | .0                    | .0   | 1.6                     | .3                | .0           | 2.1               | .0                        | 3.7           | .5                                    | 91.8             |
| 18021         | .0                 | .7           | .2   | .0           | .0   | .0                    | .0   | .9                      | .2                | .0           | 4.0               | .0                        | 2.6           | .5                                    | 91.7             |
| TOT PCT       | .4                 | 1.4          | .2   | .0           | .0   | .0                    | .0   | 2.0                     | .2                | .0           | 3.2               | .0                        | 2.6           | .4                                    | 91.7             |
| TOT OBS:      | 1607               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                                       |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00   |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |       |
| N        | 1.4                | 12.5 | 8.0   | .7    | *     | .0  |      | 22.6         | 10.1        |             | 29.0       | 15.5  | 23.3  | 23.8  | 33.2  | 18.4  | 22.6  | 19.4  |
| NE       | 2.3                | 26.5 | 20.2  | 1.7   | *     | .0  |      | 50.7         | 10.7        |             | 48.4       | 48.8  | 49.2  | 53.3  | 47.1  | 54.7  | 51.1  | 51.4  |
| E        | 1.0                | 8.6  | 5.4   | .6    | .0    | .0  |      | 15.6         | 10.2        |             | 9.8        | 23.2  | 15.0  | 13.4  | 7.1   | 19.8  | 15.4  | 18.1  |
| SE       | .3                 | 1.8  | .5    | *     | .0    | .0  |      | 2.7          | 8.4         |             | 2.0        | 4.6   | 2.3   | 2.3   | 1.4   | 2.8   | 2.3   | 3.4   |
| S        | .3                 | .6   | .1    | .0    | .0    | .0  |      | 1.0          | 5.8         |             | 1.4        | .9    | 1.2   | .3    | .8    | .5    | 1.2   | 1.3   |
| SW       | .2                 | .4   | .1    | *     | .0    | .0  |      | .7           | 7.0         |             | .3         | 1.1   | .9    | .3    | .9    | .4    | .9    | .7    |
| W        | .3                 | .6   | .1    | .0    | .0    | .0  |      | 1.0          | 5.7         |             | .5         | 1.2   | 1.3   | 1.0   | 1.7   | .7    | .7    | .7    |
| NW       | .5                 | 2.1  | .7    | *     | .0    | .0  |      | 3.3          | 7.8         |             | 5.4        | 1.8   | 4.1   | 2.8   | 5.4   | 1.6   | 3.7   | 2.5   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0           | .0          |             | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.5                |      |       |       |       |     |      | 2.5          | .0          |             | 3.1        | 3.1   | 2.8   | 2.8   | 2.5   | 1.2   | 2.0   | 2.5   |
| TOT OBS  | 543                | 3241 | 2149  | 183   | 2     | 0   | 6118 |              | 9.9         |             | 478        | 650   | 1135  | 815   | 489   | 670   | 1065  | 816   |
| TOT PCT  | 8.9                | 53.0 | 35.1  | 3.0   | *     | .0  |      | 100.0        |             |             | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 6.2                | 13.2 | 3.1   | .1    | .0  |           | 22.6     | 10.1     | 21.2       | 23.5  | 24.6  | 21.2  |
| NE       | 11.4               | 31.4 | 7.6   | .2    | .0  |           | 50.7     | 10.7     | 48.7       | 50.9  | 51.5  | 51.3  |
| E        | 4.4                | 8.8  | 2.4   | .1    | .0  |           | 15.6     | 10.2     | 17.5       | 14.3  | 14.4  | 16.6  |
| SE       | 1.2                | 1.2  | .3    | *     | .0  |           | 2.7      | 8.4      | 3.5        | 2.3   | 2.2   | 2.8   |
| S        | .7                 | .3   | *     | .0    | .0  |           | 1.0      | 5.8      | 1.1        | .8    | .6    | 1.2   |
| SW       | .5                 | .2   | .1    | .0    | .0  |           | .7       | 7.0      | .7         | .7    | .6    | .8    |
| W        | .6                 | .3   | *     | .0    | .0  |           | 1.0      | 5.7      | .9         | 1.2   | 1.1   | .7    |
| NW       | 1.4                | 1.8  | .1    | *     | .0  |           | 3.3      | 7.8      | 3.3        | 3.6   | 3.2   | 3.1   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 2.5                |      |       |       |     |           | 2.5      | .0       | 3.1        | 2.8   | 1.7   | 2.2   |
| TOT OBS  | 1764               | 3500 | 829   | 25    | 0   | 6118      |          | 9.9      | 1128       | 1950  | 1159  | 1881  |
| TOT PCT  | 28.8               | 57.2 | 13.6  | .4    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

JULY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 3.1  | 6.3 | 54.5 | 33.4               | 2.7   | .0    | .0  | 9.7   | 100.0    | 1128      |
| 06009 | 2.8  | 7.1 | 55.7 | 31.3               | 3.0   | .1    | .0  | 9.5   | 100.0    | 1950      |
| 12015 | 1.7  | 5.3 | 50.9 | 39.3               | 2.7   | .1    | .0  | 10.3  | 100.0    | 1159      |
| 18021 | 2.2  | 6.4 | 50.5 | 37.5               | 3.3   | .0    | .0  | 10.2  | 100.0    | 1881      |
| TOT   | 151  | 392 | 3241 | 2149               | 183   | 2     | 0   | 9.9   |          | 6118      |
| PCT   | 2.5  | 6.4 | 53.0 | 35.1               | 3.0   | *     | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
| N        | 5.9  | 6.5  | 10.3 | 8.8           | 5.1          | 5.1                    |
| NE       | 10.1 | 10.5 | 15.3 | 14.0          | 5.0          | 5.0                    |
| E        | 2.3  | 1.8  | 3.2  | 1.6           | 4.6          | 4.6                    |
| SE       | .6   | .2   | .7   | .4            | 4.6          | 4.6                    |
| S        | .6   | .4   | .2   | .1            | 3.0          | 3.0                    |
| SW       | .2   | .1   | .1   | .2            | 5.3          | 5.3                    |
| W        | .1   | .0   | .3   | .1            | 5.7          | 5.7                    |
| NW       | .9   | .6   | 1.4  | 1.1           | 5.0          | 5.0                    |
| VAR      | .6   | .2   | .4   | .3            | 3.9          | 3.9                    |
| CALM     | .0   | .0   | .0   | .0            | 5.0          | 5.0                    |
| TOT OBS  | 207  | 198  | 312  | 259           | 976          |                        |
| TOT PCT  | 21.2 | 20.3 | 32.0 | 26.5          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| WIND DIR | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+<br>ANY HGT | NH <5/8<br>TOTAL<br>OBS |
|----------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------------------|
|          |            |            |            |            |              |              |              |              |              |                  |                         |
| N        | .0         | .0         | .5         | 2.2        | 6.8          | 2.9          | 1.5          | .8           | .4           | .2               | 16.2                    |
| NE       | .0         | .0         | .7         | 4.1        | 10.4         | 4.9          | 1.8          | .7           | .6           | .6               | 25.8                    |
| E        | .0         | .0         | .1         | .5         | 1.9          | .6           | .2           | .2           | .0           | .1               | 5.3                     |
| SE       | .0         | .0         | .0         | .2         | .3           | .1           | *            | .0           | .0           | .0               | 1.2                     |
| S        | .0         | .0         | .1         | .0         | .2           | .0           | .0           | .0           | .0           | .0               | 1.1                     |
| SW       | .0         | .0         | *          | .0         | .2           | .0           | .1           | .0           | .0           | .0               | .2                      |
| W        | .0         | .0         | .0         | .0         | .2           | .0           | .0           | .2           | .0           | .0               | .2                      |
| NW       | .0         | .0         | *          | .2         | .9           | .2           | .0           | .3           | .1           | .0               | 2.3                     |
| VAR      | .0         | .0         | .0         | .0         | .2           | .1           | .0           | .0           | .0           | .0               | 1.2                     |
| CALM     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0               | .0                      |
| TOT OBS  | 207        | 198        | 312        | 259        | 976          |              |              |              |              |                  | 976                     |
| TOT PCT  | 21.2       | 20.3       | 32.0       | 26.5       | 100.0        |              |              |              |              |                  |                         |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NH)

| CEILING<br>(FEET) | * OR<br>>10 | * OR<br>>5 | * OR<br>>2 | VSBY (NH)  |              |              |               | * OR<br>>1/2 | * OR<br>>1/4 | * OR<br>>50YD | * OR<br>>0 |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|--------------|--------------|---------------|------------|
|                   |             |            |            | * OR<br>>1 | * OR<br>>1/2 | * OR<br>>1/4 | * OR<br>>50YD |              |              |               |            |
| * OR >6500        | 1.3         | 2.1        | 2.1        | 2.1        | 2.1          | 2.1          | 2.1           | 2.1          | 2.1          | 2.1           | 2.1        |
| * OR >5000        | 2.9         | 4.0        | 4.0        | 4.0        | 4.1          | 4.1          | 4.1           | 4.1          | 4.1          | 4.1           | 4.1        |
| * OR >3500        | 5.4         | 7.6        | 7.7        | 7.7        | 7.8          | 7.8          | 7.8           | 7.8          | 7.8          | 7.8           | 7.8        |
| * OR >2000        | 12.3        | 16.5       | 16.6       | 16.6       | 16.7         | 16.7         | 16.7          | 16.7         | 16.7         | 16.7          | 16.7       |
| * OR >1000        | 28.6        | 37.3       | 37.5       | 37.5       | 37.6         | 37.6         | 37.6          | 37.6         | 37.6         | 37.6          | 37.6       |
| * OR >600         | 34.1        | 44.5       | 44.8       | 44.8       | 44.9         | 44.9         | 44.9          | 44.9         | 44.9         | 44.9          | 44.9       |
| * OR >300         | 35.2        | 45.9       | 46.2       | 46.2       | 46.3         | 46.3         | 46.3          | 46.3         | 46.3         | 46.3          | 46.3       |
| * OR >150         | 35.2        | 45.9       | 46.2       | 46.2       | 46.3         | 46.3         | 46.3          | 46.3         | 46.3         | 46.3          | 46.3       |
| * OR >0           | 35.2        | 45.9       | 46.2       | 46.2       | 46.3         | 46.3         | 46.3          | 46.3         | 46.3         | 46.3          | 46.3       |
| TOTAL             | 352         | 459        | 462        | 462        | 463          | 463          | 463           | 463          | 463          | 463           | 463        |

TOTAL NUMBER OF OBS: 1001

PCT FREQ NH <5/8: 53.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS CD | TOTAL<br>OBS |
|-----|------|------|------|------|-----|-----|-----|------|--------|--------------|
| 8.1 | 12.0 | 10.7 | 12.3 | 10.2 | 6.8 | 8.7 | 9.3 | 21.8 | .0     | 1056         |

PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

JULY

AREA 0007 CAPE VERDE ISLANDS  
19.5N 24.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N      | NE       | E        | SE       | S        | SW       | W        | NW       | VAR      | CALM     | PCT      | TOTAL<br>OBS |      |
|--------------|--------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|------|
| <1/2         | PCP    | .0     | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0           |      |
|              | NO PCP | .0     | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0           |      |
|              | TOT %  | .0     | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0           |      |
| 1/2<1        | PCP    | .0     | .1       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1           |      |
|              | NO PCP | .3     | 1.4      | .7       | .1       | .0       | .0       | .1       | .0       | .0       | .0       | 2.6      | 2.6          |      |
|              | TOT %  | .3     | 1.5      | .8       | .1       | .0       | .0       | .1       | .0       | .0       | .0       | 2.7      | 2.7          |      |
| 1<2          | PCP    | .0     | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0           |      |
|              | NO PCP | *<br>* | .4<br>.4 | .0<br>.0 | .1<br>.1 | .0<br>.0 | .0<br>.0 | .0<br>.0 | .1<br>.1 | .0<br>.0 | .0<br>.0 | .5<br>.5 | .5           |      |
|              | TOT %  | *<br>* | .4<br>.4 | .0<br>.0 | .1<br>.1 | .0<br>.0 | .0<br>.0 | .0<br>.0 | .1<br>.1 | .0<br>.0 | .0<br>.0 | .5<br>.5 | .5           |      |
| 2<5          | PCP    | .0     | .0       | .0       | .1       | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .1           |      |
|              | NO PCP | .3     | .5       | .1       | .1       | .0       | .0       | .0       | .1       | .0       | .0       | 1.0      | 1.0          |      |
|              | TOT %  | .3     | .5       | .1       | .1       | .0       | .0       | .0       | .1       | .0       | .0       | 1.0      | 1.0          |      |
| 5<10         | PCP    | .1     | .5       | .4       | .1       | *        | .1       | .0       | *        | .0       | .0       | 1.2      | 1.2          |      |
|              | NO PCP | 8.1    | 19.1     | 6.3      | 1.5      | .3       | .4       | .5       | 1.8      | .0       | .4       | 38.5     | 38.5         |      |
|              | TOT %  | 8.3    | 19.6     | 6.7      | 1.6      | .3       | .5       | .5       | 1.8      | .0       | .4       | 39.8     | 39.8         |      |
| 10+          | PCP    | .1     | *        | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | .2       | .2           |      |
|              | NO PCP | 17.5   | 28.1     | 4.9      | .7       | 1.0      | .4       | .3       | 2.1      | .0       | .8       | 55.7     | 55.7         |      |
|              | TOT %  | 17.6   | 28.2     | 4.9      | .7       | 1.0      | .4       | .3       | 2.1      | .0       | .8       | 55.9     | 55.9         |      |
| TOT OBS      |        |        |          |          |          |          |          |          |          |          |          |          |              | 1541 |
| TOT PCT      |        | 26.5   | 50.1     | 12.4     | 2.6      | 1.4      | .9       | .8       | 4.1      | .0       | 1.2      | 100.0    |              |      |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |      |
|--------------|------------|------|------|------|-----|-----|----|-----|-----|-----|------|-------|--------------|------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .0    | .0           |      |
|              | 4-10       | .0   | *    | *    | .0  | .0  | .0 | .0  | .0  | .0  | .0   | *     | *            |      |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .0    | .0           |      |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .0    | .0           |      |
|              | TOT %      | .0   | *    | *    | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .0    | *            |      |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | *   | .0 | .0  | .0  | .0  | .1   | .1    | .1           |      |
|              | 4-10       | .1   | .4   | .3   | *   | .0  | .0 | *   | .0  | .0  | .0   | .8    | .8           |      |
|              | 11-21      | .1   | .3   | .1   | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .5    | .5           |      |
|              | 22+        | .0   | .0   | *    | .0  | .0  | .0 | .0  | .0  | .0  | .0   | *     | *            |      |
|              | TOT %      | .2   | .7   | .4   | *   | *   | .0 | *   | .0  | .0  | .1   | 1.5   | 1.5          |      |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0 | .0  | *   | .0  | .0   | *     | *            |      |
|              | 4-10       | .1   | .2   | *    | *   | .0  | .0 | .0  | *   | .0  | .0   | .3    | .3           |      |
|              | 11-21      | *    | .2   | *    | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .3    | .3           |      |
|              | 22+        | .0   | *    | .0   | .0  | .0  | .0 | .0  | .0  | .0  | .0   | *     | *            |      |
|              | TOT %      | .1   | .5   | .1   | *   | .0  | .0 | .0  | *   | .0  | .0   | .7    | .7           |      |
| 2<5          | 0-3        | *    | .2   | .0   | .0  | .0  | *  | *   | *   | .0  | .1   | .4    | .4           |      |
|              | 4-10       | .3   | .6   | .1   | .1  | *   | .0 | *   | .1  | .0  | .0   | 1.3   | 1.3          |      |
|              | 11-21      | .3   | .5   | 0    | .0  | .0  | .0 | *   | *   | .0  | .0   | .9    | .9           |      |
|              | 22+        | *    | *    | *    | .0  | .0  | .0 | .0  | .0  | .0  | .0   | .1    | .1           |      |
|              | TOT %      | .6   | 1.4  | 2    | .1  | *   | *  | .1  | .1  | .0  | .1   | 2.6   | 2.6          |      |
| 5<10         | 0-3        | .6   | .6   | .3   | .2  | *   | .1 | .1  | .3  | .0  | .6   | 2.8   | 2.8          |      |
|              | 4-10       | 3.9  | 8.9  | 3.1  | .6  | .2  | .1 | .3  | .9  | .0  | .0   | 18.0  | 18.0         |      |
|              | 11-21      | 2.7  | 7.6  | 1.4  | .1  | *   | .1 | *   | .3  | .0  | .0   | 12.3  | 12.3         |      |
|              | 22+        | .2   | .3   | *    | .0  | .0  | .0 | .0  | *   | .0  | .0   | .5    | .5           |      |
|              | TOT %      | 7.4  | 17.4 | 4.9  | .9  | .3  | .3 | .5  | 1.5 | .0  | .6   | 33.7  | 33.7         |      |
| 10+          | 0-3        | .9   | 1.3  | .5   | .1  | .2  | .1 | .4  | .2  | .0  | 1.1  | 4.8   | 4.8          |      |
|              | 4-10       | 10.3 | 18.3 | 4.5  | 1.1 | .5  | .2 | .5  | 1.6 | .0  | .0   | 37.0  | 37.0         |      |
|              | 11-21      | 5.8  | 11.3 | 1.1  | .1  | .1  | .1 | .1  | .6  | .0  | .0   | 19.2  | 19.2         |      |
|              | 22+        | .1   | .3   | .1   | .0  | .0  | .0 | .0  | *   | .0  | .0   | .5    | .5           |      |
|              | TOT %      | 17.1 | 31.2 | 6.2  | 1.2 | .8  | .4 | .9  | 2.4 | .0  | 1.1  | 61.4  | 61.4         |      |
| TOT OBS      |            |      |      |      |     |     |    |     |     |     |      |       |              | 3089 |
| TOT PCT      |            | 25.4 | 51.1 | 11.8 | 2.4 | 1.1 | .7 | 1.5 | 4.1 | .0  | 1.9  | 100.0 |              |      |



PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973

JULY

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .0         | 1.2        | 5.5        | 19.6         | 6.3          | 3.9          | 2.0          | .8           | .4    | 39.6  | 60.4               | 255          |
| 06009         | .0         | .0         | .4         | 7.4        | 24.6         | 13.1         | 2.0          | 2.5          | 1.2          | .4    | 51.6  | 48.4               | 244          |
| 12015         | .0         | .0         | 2.5        | 9.2        | 17.7         | 8.9          | 5.3          | 2.1          | 1.8          | 1.8   | 49.3  | 50.7               | 282          |
| 18021         | .0         | .0         | 1.2        | 6.1        | 19.8         | 6.5          | 2.8          | 1.6          | .4           | 1.2   | 39.7  | 60.3               | 247          |
| TOT           | 0          | 0          | 14         | 73         | 209          | 89           | 37           | 21           | 11           | 10    | 464   | 564                | 1028         |
| PCT           | .0         | .0         | 1.4        | 7.1        | 20.3         | 8.7          | 3.6          | 2.0          | 1.1          | 1.0   | 45.1  | 54.9               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2  | 1/2<1 | 1<2 | 2<5  | 5<10 | 10+   | TOTAL<br>OBS |
|---------------|-------|-------|-----|------|------|-------|--------------|
| 00003         | .0    | 1.1   | .3  | 1.8  | 33.3 | 63.5  | 657          |
| 06009         | .0    | 2.0   | .7  | 2.9  | 35.4 | 59.0  | 938          |
| 12015         | .2    | 1.4   | 1.1 | 2.3  | 29.6 | 65.5  | 649          |
| 18021         | .0    | 1.6   | .8  | 3.0  | 37.2 | 57.4  | 911          |
| TOT           | 1     | 50    | 23  | 81   | 1082 | 3155  |              |
| PCT           | * 1.6 | .7    | 2.6 | 34.3 | 60.8 | 100.0 |              |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8), BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|----------------|-------------------|--------------|
| 00003         | .0           | 1.2        | 7.2         | 33.5           | 59.4              | 251          |
| 06009         | .0           | .9         | 10.5        | 45.0           | 44.5              | 229          |
| 12015         | .0           | 2.5        | 12.5        | 38.0           | 49.5              | 279          |
| 18021         | .0           | 1.2        | 8.7         | 33.1           | 58.3              | 242          |
| TOT           | 0            | 15         | 98          | 373            | 530               | 1001         |
| PCT           | .0           | 1.5        | 9.8         | 37.3           | 52.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .1    | .4    | .1    | .0    | .0     | 6            | .6          |
| 80/84  | .0   | .0    | .0    | .3    | 1.9   | 4.5   | 2.2   | .7     | 100          | 9.6         |
| 75/79  | .0   | .0    | .0    | .0    | 2.9   | 26.9  | 28.9  | 8.3    | 695          | 67.0        |
| 70/74  | .0   | .0    | .0    | .0    | .7    | 5.8   | 11.8  | 4.5    | 236          | 22.7        |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .0    | .1    | .0     | 1            | .1          |
| TOTAL  | 0    | 0     | 0     | 4     | 61    | 387   | 446   | 140    | 1038         | 100.0       |
| PCT    | .0   | .0    | .0    | .4    | 5.9   | 37.3  | 43.0  | 13.5   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW | W  | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|----|----|-----|-----|------|
| 85/89 | .3   | .1   | .0  | .0  | .1  | *  | .0 | .0  | .0  | .0   |
| 80/84 | 3.7  | 3.2  | .9  | .1  | .3  | .1 | .1 | .8  | .0  | .5   |
| 75/79 | 18.9 | 34.0 | 6.6 | 1.5 | .9  | .5 | .4 | 3.3 | .0  | 1.0  |
| 70/74 | 6.7  | 13.0 | 1.6 | .4  | .4  | .1 | .0 | .5  | .0  | .2   |
| 65/69 | .0   | .1   | .0  | .0  | .0  | .0 | .0 | .0  | .0  | .0   |
| TOTAL | 29.6 | 50.4 | 9.1 | 2.0 | 1.6 | .7 | .5 | 4.6 | .0  | 1.6  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 85  | 80  | 78  | 75  | 72 | 71 | 68  | 75.2 | 1125         |
| 06009         | 89  | 81  | 79  | 75  | 72 | 71 | 68  | 75.2 | 1940         |
| 12015         | 90  | 86  | 82  | 78  | 74 | 72 | 67  | 77.8 | 1124         |
| 18021         | 90  | 84  | 82  | 77  | 73 | 72 | 67  | 76.8 | 1838         |
| TOT           | 90  | 83  | 81  | 76  | 73 | 71 | 67  | 76.2 | 6027         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .0    | 1.5   | 25.1  | 58.2  | 15.2   | 83   | 263          |
| 06009         | .0   | .4    | 3.3   | 24.5  | 49.3  | 22.6   | 83   | 274          |
| 12015         | .0   | .7    | 10.9  | 50.0  | 30.3  | 8.0    | 78   | 274          |
| 18021         | .0   | .4    | 7.4   | 50.0  | 34.8  | 7.4    | 79   | 256          |
| TOT           | 0    | 4     | 62    | 398   | 460   | 143    | 81   | 1067         |

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PERIOD: (PRIMARY) 1895-1973  
(OVER-ALL) 1854-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | .1       | 2     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .2       | .1       | 6     | .1       | .3        |
| 7/8                | .0       | .0       | .0       | .3       | .5       | .3       | .0       | 15    | .0       | 1.0       |
| 6                  | .0       | .0       | .0       | .3       | .6       | .0       | .0       | 14    | .0       | 1.0       |
| 5                  | .0       | .1       | .0       | .3       | .8       | .0       | .0       | 17    | .1       | 1.1       |
| 4                  | .0       | .0       | .1       | 1.6      | .8       | .0       | .0       | 38    | .1       | 2.5       |
| 3                  | .0       | .1       | .8       | 1.7      | .7       | .1       | .0       | 49    | .3       | 3.1       |
| 2                  | .0       | .0       | 1.8      | 3.8      | 1.6      | .1       | .0       | 108   | .3       | 7.1       |
| 1                  | .0       | .1       | 4.8      | 6.7      | .4       | .0       | .0       | 175   | .4       | 11.6      |
| 0                  | .0       | .1       | 11.1     | 8.0      | .5       | .0       | .0       | 286   | 1.0      | 18.7      |
| -1                 | .0       | .3       | 17.2     | 6.1      | .4       | .0       | .0       | 351   | .7       | 23.4      |
| -2                 | .0       | .6       | 9.0      | 3.2      | .1       | .0       | .0       | 189   | .1       | 12.8      |
| -3                 | .0       | .4       | 3.8      | 2.0      | .0       | .0       | .0       | 91    | .0       | 6.2       |
| -4                 | .0       | .1       | 3.0      | 1.0      | .0       | .0       | .0       | 60    | .0       | 4.1       |
| -5                 | .0       | .2       | 1.9      | .3       | .0       | .0       | .0       | 36    | .0       | 2.5       |
| -6                 | .0       | .1       | .3       | .1       | .0       | .0       | .0       | 8     | .0       | .5        |
| -7/-8              | .1       | .0       | .5       | .1       | .0       | .0       | .0       | 10    | .0       | .7        |
| -9/-10             | .0       | .0       | .1       | .0       | .0       | .0       | .0       | 2     | .0       | .1        |
| TOTAL              | 1        | 31       | 797      | 521      | 96       | 11       | 2        | 1459  | 45       | 1414      |
| PCT                | .1       | 2.1      | 54.6     | 35.7     | 6.6      | .8       | .1       | 100.0 | 3.1      | 96.9      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | .8  | 1.2  | .0    | .0    | .0    | .0  | 2.0  | .5  | 2.7  | .0    | .0    | .0    | .0  | 3.2  |
| 1-2     | .3  | 10.9 | 1.3   | .0    | .0    | .0  | 12.5 | 1.0 | 17.4 | 5.9   | .0    | .0    | .0  | 24.3 |
| 3-4     | .2  | 4.4  | 4.8   | .3    | .0    | .0  | 9.7  | .4  | 6.6  | 6.8   | *     | .0    | .0  | 13.8 |
| 5-6     | .0  | 1.9  | 3.1   | .0    | .0    | .0  | 5.0  | .0  | 1.4  | 6.0   | .2    | .0    | .0  | 7.5  |
| 7       | .0  | .0   | .9    | .0    | .0    | .0  | .9   | .0  | .2   | 1.1   | *     | .0    | .0  | 1.4  |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .3   | .0  | .0   | .4    | .2    | .0    | .0  | .5   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-50   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.2 | 18.4 | 10.2  | .4    | .0    | .0  | 30.3 | 1.8 | 28.4 | 20.1  | .5    | .0    | .0  | 50.8 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .0  | .6   | .0    | .0    | .0    | .0  | .6  | .1  | .0   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .2  | 2.6  | .3    | .0    | .0    | .0  | 3.1 | .0  | 1.0  | .0    | .0    | .0    | .0  | 1.0 |
| 3-4     | .0  | 1.6  | .5    | .2    | .0    | .0  | 2.3 | .0  | .5   | .4    | .0    | .0    | .0  | .8  |
| 5-6     | .5  | .8   | 1.3   | .0    | .0    | .0  | 2.7 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 5.6  | 2.2   | .5    | .0    | .0  | 9.0 | .1  | 1.4  | .4    | .0    | .0    | .0  | 1.9 |

PERIOD: (OVER-ALL) 1963-1973

JULY

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |           |
| <1      | .3  | .0   | .0    | .0    | .0    | .0  | .3  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |     |           |
| 1-2     | .0  | .6   | .0    | .0    | .0    | .0  | .6  | .0  | *    | .0    | .0    | .0    | .0  | *   |     |           |
| 3-4     | .0  | .4   | .0    | .0    | .0    | .0  | .4  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |     |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |     |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |     |           |
| TOT PCT | .3  | 1.0  | .1    | .0    | .0    | .0  | 1.4 | .0  | .4   | *     | .0    | .0    | .0  | .5  |     |           |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .2  | .4   | .0    | .0    | .0    | .0  | .6  |      |           |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | 1.6  | *     | .0    | .0    | .0  | 1.7 |      |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .6   | .4    | *     | .0    | .0  | 1.1 |      |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .4   | .4    | .0    | .0    | .0  | .8  |      |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |      |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |      |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |      |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |      |           |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .2  | 3.0  | 1.2   | .1    | .0    | .0  | 4.5 | 98.4 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.2 | 5.3  | .0    | .0    | .0    | .0  | 9.4   |         |
| 1-2     | 1.6 | 33.9 | 7.4   | .0    | .0    | .0  | 42.9  |         |
| 3-4     | .5  | 14.1 | 12.7  | .5    | .0    | .0  | 27.9  |         |
| 5-6     | .5  | 4.3  | 10.7  | .2    | .0    | .0  | 15.8  |         |
| 7       | .0  | .2   | 2.4   | .4    | .0    | .0  | 2.9   |         |
| 8-9     | .0  | .0   | .5    | .4    | .0    | .0  | .9    |         |
| 10-11   | .0  | .0   | .2    | .0    | .0    | .0  | .2    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 6.9 | 57.8 | 23.9  | 1.4   | .0    | .0  | 100.0 | 552     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7   | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|-----|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 12.9 | 15.2 | 9.6  | 1.3 | .8  | .3    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 324   | 3        |
| 6-7          | .4  | 1.7  | 9.9  | 11.6 | 4.3 | .9  | .6    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 226   | 5        |
| 8-9          | .0  | .1   | 2.3  | 2.9  | 2.5 | 1.0 | .5    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 73    | 6        |
| 10-11        | .0  | .0   | .3   | .6   | 1.4 | .3  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 20    | 6        |
| 12-13        | .0  | .0   | .8   | .5   | .0  | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10    | 4        |
| >13          | .0  | .0   | .0   | .4   | .0  | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3     | 5        |
| INDET        | 2.3 | 3.9  | 5.2  | 2.9  | .4  | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 114   | 3        |
| TOTAL        | 36  | 143  | 259  | 219  | 76  | 24  | 11    | 2  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 770   | 4        |
| PCT          | 4.7 | 18.6 | 33.6 | 28.4 | 9.9 | 3.1 | 1.4   | .3 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1896-1973  
(OVER-ALL) 1854-1973

AUGUST

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15.5N 24.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FUG WU PCPN | FUG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | 1.4  | .3        | .5   | .0        | .0   | .0              | .0   | 2.2             | .7             | .1                      | 4.5         | .0                  | 1.2        | .0              | 91.3       |  |
| NE                 | .6   | 1.0       | .8   | .0        | .0   | .0              | .1   | 2.5             | .6             | .8                      | 5.6         | .0                  | 1.9        | .0              | 88.6       |  |
| E                  | .0   | 2.8       | .0   | .0        | .0   | .0              | .3   | 3.1             | 1.3            | 3.3                     | 7.6         | .0                  | 2.1        | .0              | 82.8       |  |
| SE                 | .0   | 1.7       | .0   | .0        | .0   | .0              | .0   | 1.7             | 2.3            | 2.3                     | 12.6        | .0                  | 2.3        | 2.3             | 76.4       |  |
| S                  | .0   | 9.1       | .0   | .0        | .0   | .0              | .0   | 9.1             | .0             | 2.6                     | .0          | .0                  | .0         | .0              | 88.3       |  |
| SW                 | 10.8 | 4.1       | 2.7  | .0        | .0   | .0              | .0   | 17.6            | .0             | .0                      | 5.4         | .0                  | .0         | .0              | 77.0       |  |
| W                  | 2.5  | 6.4       | .0   | .0        | .0   | .0              | .0   | 8.9             | 2.5            | .0                      | 10.2        | .0                  | .0         | .0              | 78.3       |  |
| NW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | 6.6            | .6                      | 6.6         | .0                  | 1.2        | .0              | 85.1       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 6.1                     | .0          | .0                  | 3.0        | .0              | 90.9       |  |
| TOT PCT            | 1.0  | 1.4       | .6   | .0        | .0   | .0              | .1   | 3.0             | 1.1            | 1.0                     | 5.6         | .0                  | 1.6        | .1              | 87.6       |  |
| TOT OBS:           | 1436 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| PRECIPITATION TYPE |      |              |      |              |      |                       |      |                    |                   | OTHER WEATHER PHENOMENA |                   |                           |               |                                 |                  |
|--------------------|------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------|-------------------------|-------------------|---------------------------|---------------|---------------------------------|------------------|
| HOUR<br>(GMT)      | RAIN | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME | PCPN PAST<br>HOUR | THDR<br>LTNG            | FUG<br>WJ<br>PCPN | FUG WJ<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 0000               | .3   | .8           | 1.1  | .0           | .0   | .0                    | .3   | 2.4                | .8                | 1.9                     | 2.7               | .0                        | 1.9           | .3                              | 90.3             |
| 0600               | 1.8  | 3.0          | 1.0  | .0           | .0   | .0                    | .0   | 5.8                | 1.8               | 2.3                     | 6.8               | .0                        | .5            | .0                              | 82.8             |
| 1200               | .6   | 1.5          | .3   | .0           | .0   | .0                    | .0   | 2.4                | 1.5               | .0                      | 5.2               | .0                        | 2.4           | .0                              | 88.5             |
| 1800               | 1.2  | .7           | .0   | .0           | .0   | .0                    | .0   | 2.0                | .5                | .7                      | 7.7               | .0                        | 2.0           | .0                              | 87.0             |
| TOT PCT            | 1.0  | 1.5          | .6   | .0           | .0   | .0                    | .1   | 3.2                | 1.1               | 1.3                     | 5.7               | .0                        | 1.7           | .1                              | 87.0             |
| TOT OBS:           | 1497 |              |      |              |      |                       |      |                    |                   |                         |                   |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    | 48+  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |    |  |
|----------|--------------------|------|-------|-------|-------|----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|----|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 |      |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21 |  |
| N        | 1.5                | 12.8 | 7.4   | .3    | .0    | .0 | 22.1 | 9.6       | 25.8     | 16.9     | 21.2       | 24.0  | 30.2  | 19.8  | 22.0  | 20.6  |    |  |
| NE       | 2.3                | 24.2 | 15.5  | .7    | .0    | .0 | 42.7 | 10.0      | 40.3     | 44.9     | 40.4       | 43.2  | 38.3  | 45.5  | 45.6  | 41.8  |    |  |
| E        | 1.2                | 8.6  | 4.5   | .3    | .1    | .0 | 14.7 | 9.5       | 9.1      | 18.1     | 14.2       | 16.0  | 8.7   | 18.9  | 13.3  | 16.5  |    |  |
| SE       | .8                 | 2.7  | .8    | .1    | .0    | .0 | 4.3  | 8.0       | 3.0      | 5.8      | 3.9        | 4.6   | 2.7   | 4.6   | 4.1   | 5.0   |    |  |
| S        | .5                 | 1.4  | .4    | .1    | .0    | .0 | 2.4  | 7.8       | 4.0      | 2.0      | 2.7        | 2.2   | 3.4   | 1.4   | 2.2   | 2.0   |    |  |
| SW       | .6                 | 1.3  | .6    | .1    | .0    | .0 | 2.6  | 8.3       | 3.3      | 2.7      | 3.0        | 1.9   | 2.0   | 1.9   | 3.0   | 2.9   |    |  |
| W        | .4                 | 1.6  | .4    | .1    | .0    | .0 | 2.6  | 8.1       | 3.3      | 2.6      | 3.4        | 1.6   | 2.8   | 1.3   | 2.6   | 2.9   |    |  |
| NW       | .6                 | 3.1  | 1.6   | .0    | .0    | .0 | 5.4  | 8.7       | 6.9      | 3.5      | 6.2        | 5.2   | 8.0   | 4.4   | 5.2   | 4.5   |    |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 | .0   | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    |    |  |
| CALM     | 3.2                |      |       |       |       |    | 3.2  | .0        | 4.2      | 3.4      | 5.0        | 1.3   | 4.0   | 2.1   | 1.9   | 3.8   |    |  |
| TOT OBS  | 656                | 3266 | 1828  | 105   | 6     | 0  | 5861 | 9.2       | 473      | 667      | 1068       | 765   | 470   | 614   | 997   | 807   |    |  |
| TOT PCT  | 11.2               | 55.7 | 31.2  | 1.8   | .1    | .0 |      | 100.0     | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00 03      | 06 09 | 12 15 | 18 21 |
| N        | 6.4                | 13.5 | 2.2   | *     | .0  | 22.1      | 9.6      | 20.6     | 22.4       | 24.3  | 21.4  |       |
| NE       | 11.3               | 26.7 | 4.7   | .1    | .0  | 42.7      | 10.0     | 43.0     | 41.5       | 42.4  | 43.9  |       |
| E        | 4.9                | 8.0  | 1.6   | .1    | *   | 14.7      | 9.5      | 14.4     | 14.9       | 14.5  | 14.7  |       |
| SE       | 2.0                | 1.9  | .3    | *     | .0  | 4.3       | 8.0      | 4.6      | 4.2        | 3.8   | 4.5   |       |
| S        | 1.3                | .9   | .2    | *     | .0  | 2.4       | 7.8      | 2.9      | 2.5        | 2.2   | 2.1   |       |
| SW       | 1.3                | 1.0  | .3    | .0    | .0  | 2.6       | 8.3      | 3.0      | 2.5        | 1.9   | 3.0   |       |
| W        | 1.3                | 1.1  | .2    | *     | .0  | 2.6       | 8.1      | 2.9      | 2.6        | 2.0   | 2.7   |       |
| NW       | 2.0                | 3.1  | .3    | .0    | .0  | 5.4       | 8.7      | 4.9      | 5.8        | 6.0   | 4.9   |       |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       | .0       | .0         | .0    | .0    |       |
| CALM     | 3.2                |      |       |       |     | 3.2       | .0       | 3.8      | 3.4        | 3.0   | 2.8   |       |
| TOT OBS  | 1972               | 3296 | 578   | 14    | 1   | 5861      | 9.2      | 1140     | 1833       | 1084  | 1804  |       |
| TOT PCT  | 33.6               | 56.2 | 9.9   | .2    | *   | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |       |

PERIOD: (PRIMARY) 1896-1973  
(OVER-ALL) 1854-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |    | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|----|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |    |     |       |          |           |
| 00003 | 3.8  | 7.9 | 57.5 | 28.5               | 2.2   | .1    | .0 | 9.0 | 100.0 | 1140     |           |
| 06009 | 3.4  | 8.5 | 58.9 | 27.5               | 1.6   | .1    | .0 | 8.8 | 100.0 | 1833     |           |
| 12015 | 3.0  | 7.7 | 51.0 | 36.7               | 1.5   | .2    | .0 | 9.8 | 100.0 | 1084     |           |
| 18021 | 2.8  | 7.8 | 54.2 | 33.3               | 1.9   | .1    | .0 | 9.4 | 100.0 | 1804     |           |
| TOT   | 188  | 468 | 3266 | 1826               | 105   | 0     | 0  | 9.2 |       | 5861     |           |
| PCT   | 3.2  | 8.0 | 55.7 | 31.2               | 1.8   | .1    | .0 |     | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 6.2  | 6.4  | 9.8  | 4.2          |              | 4.6                    |
| NE       | 10.4 | 8.8  | 15.2 | 8.5          |              | 4.8                    |
| E        | 2.7  | 1.9  | 2.6  | 2.0          |              | 4.5                    |
| SE       | .8   | .9   | 1.0  | .4           |              | 4.1                    |
| S        | 1.1  | .3   | 1.5  | .1           |              | 3.9                    |
| SW       | .7   | .2   | .9   | .3           |              | 4.2                    |
| W        | .5   | .3   | 1.7  | .4           |              | 5.2                    |
| NW       | 1.4  | 1.4  | 2.5  | 1.6          |              | 4.9                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.4  | .7   | .4   | .5           |              | 3.5                    |
| TOT OBS  | 232  | 191  | 326  | 165          | 914          | 4.7                    |
| TOT PCT  | 25.4 | 20.9 | 35.7 | 18.1         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .0         | .0         | .3         | 2.4        | 4.8          | 1.9          | 1.3          | .3           | .2           | .1    | 15.4               |              |
| NE      | .1         | .1         | .4         | 2.8        | 10.0         | 3.8          | 1.8          | .3           | .1           | .4    | 23.1               |              |
| E       | .0         | .0         | .0         | 1.0        | 1.6          | .3           | .1           | .3           | .0           | .0    | 5.8                |              |
| SE      | .0         | .2         | .1         | .4         | .1           | .1           | .0           | .0           | .0           | .1    | 2.1                |              |
| S       | .0         | .0         | .1         | .2         | .0           | .2           | .2           | .1           | .0           | .0    | 2.2                |              |
| SW      | .0         | .0         | .0         | .2         | .4           | .0           | .1           | .0           | .0           | .0    | 1.5                |              |
| W       | .0         | .0         | .0         | .2         | .6           | .1           | .3           | .0           | .1           | .0    | 1.6                |              |
| NW      | .0         | .0         | .1         | .1         | 1.4          | .7           | .6           | .0           | .1           | .3    | 3.6                |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .0         | .0         | .0         | .0         | .3           | .2           | .1           | .0           | .0           | .0    | 2.4                |              |
| TOT OBS | 1          | 3          | 8          | 67         | 175          | 67           | 41           | 10           | 4            | 9     | 529                | 914          |
| TOT PCT | .1         | .3         | .9         | 7.3        | 19.1         | 7.3          | 4.5          | 1.1          | .4           | 1.0   | 57.9               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | .9          | 1.4        | 1.5        | 1.5        | 1.5          | 1.5          | 1.5           | 1.5        |
| = OR >5000        | 1.9         | 2.6        | 2.7        | 2.7        | 2.7          | 2.7          | 2.7           | 2.7        |
| = OR >3500        | 5.4         | 6.6        | 7.2        | 7.2        | 7.2          | 7.2          | 7.2           | 7.2        |
| = OR >2000        | 11.2        | 13.7       | 14.2       | 14.2       | 14.2         | 14.2         | 14.2          | 14.2       |
| = OR >1000        | 25.5        | 32.4       | 33.2       | 33.3       | 33.3         | 33.3         | 33.3          | 33.3       |
| = OR >600         | 31.2        | 39.7       | 40.8       | 40.9       | 40.9         | 40.9         | 40.9          | 40.9       |
| = OR >300         | 31.6        | 40.5       | 41.6       | 41.7       | 41.7         | 41.7         | 41.7          | 41.7       |
| = OR >150         | 31.9        | 40.8       | 41.9       | 42.0       | 42.0         | 42.0         | 42.0          | 42.0       |
| = OR >0           | 32.1        | 40.9       | 42.0       | 42.1       | 42.1         | 42.1         | 42.1          | 42.1       |
| TOTAL             | 390         | 383        | 393        | 394        | 394          | 394          | 394           | 394        |

TOTAL NUMBER OF OBS: 936

PCT FREQ NH <5/8: 57.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0   | 1    | 2    | 3    | 4   | 5   | 6   | 7    | 8    | OBSCD | TOTAL<br>OBS |
|-----|------|------|------|-----|-----|-----|------|------|-------|--------------|
| 8.9 | 12.8 | 13.6 | 13.3 | 8.8 | 8.7 | 9.3 | 10.8 | 14.1 | .0    | 1003         |

PERIOD: (PRIMARY) 1896-1973  
(OVER-ALL) 1854-1973

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15.5N 24.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N     | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | * * * | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %  | * * * | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .1    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | NO PCP | 1.0   | 2.3  | .7   | .4  | .0  | .1  | .2  | .3  | .0  | .0   | 5.0   |              |
|              | TOT %  | 1.1   | 2.3  | .7   | .4  | .0  | .1  | .2  | .3  | .0  | .0   | 5.1   |              |
| 1<2          | PCP    | .0    | .0   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | NO PCP | .1    | .2   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .4    |              |
|              | TOT %  | .1    | .2   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .5    |              |
| 2<5          | PCP    | .0    | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1    | .7   | .1   | .0  | .0  | .0  | .0  | .2  | .0  | .0   | 1.1   |              |
|              | TOT %  | .1    | .7   | .1   | .0  | .0  | .0  | .0  | .2  | .0  | .0   | 1.1   |              |
| 5<10         | PCP    | .4    | .9   | .2   | *   | .2  | .3  | .2  | .0  | .0  | .0   | 2.2   |              |
|              | NO PCP | 8.3   | 14.7 | 4.7  | .9  | .7  | .6  | 1.3 | .0  | .0  | .6   | 32.5  |              |
|              | TOT %  | 8.7   | 15.6 | 4.9  | .9  | .9  | 1.0 | .7  | 1.3 | .0  | .6   | 34.7  |              |
| 10+          | PCP    | .1    | .2   | .1   | .0  | .1  | .1  | *   | .0  | .0  | .0   | .6    |              |
|              | NO PCP | 16.2  | 24.8 | 4.6  | 1.7 | 1.7 | 1.4 | 1.8 | 4.0 | .0  | 1.7  | 57.9  |              |
|              | TOT %  | 16.3  | 25.0 | 4.7  | 1.7 | 1.8 | 1.5 | 1.8 | 4.0 | .0  | 1.7  | 58.6  |              |
| TOT OBS      |        |       |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        | 26.5  | 43.9 | 10.5 | 3.0 | 2.7 | 2.6 | 2.7 | 5.8 | .0  | 2.3  | 100.0 | 1436         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | 4-10       | .1   | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .1   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | .1   | *    | .1  | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | 4-10       | .3   | .3   | .2   | .1  | .0  | .1  | .1  | .1  | .0  | .0   | 1.0   |              |
|              | 11-21      | .2   | .7   | .2   | *   | .0  | .0  | *   | .1  | .0  | .0   | 1.2   |              |
|              | 22+        | .1   | .2   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | TOT %      | .6   | 1.2  | .4   | .2  | .0  | .1  | .1  | .2  | .0  | .0   | 2.6   |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .1   | .1   | *   | .0  | *   | *   | *   | .0  | .0   | .3    |              |
|              | 11-21      | *    | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | .1   | .2   | .1   | *   | .0  | *   | *   | *   | .0  | .0   | .6    |              |
| 2<5          | 0-3        | .1   | .1   | *    | .0  | *   | *   | .0  | .0  | .0  | .1   | .5    |              |
|              | 4-10       | .1   | .7   | .2   | .1  | .1  | *   | .1  | *   | .0  | .0   | 1.3   |              |
|              | 11-21      | .1   | .4   | .1   | .0  | .0  | *   | .0  | .1  | .0  | .0   | .8    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .4   | 1.2  | .3   | .1  | .1  | .1  | .1  | .2  | .0  | .1   | 2.5   |              |
| 5<10         | 0-3        | .6   | .9   | .3   | .1  | .1  | .4  | .1  | .2  | .0  | .8   | 3.4   |              |
|              | 4-10       | 3.6  | 7.2  | 2.5  | .7  | .4  | .3  | .4  | .9  | .0  | .0   | 15.9  |              |
|              | 11-21      | 2.4  | 5.2  | 1.4  | .1  | .2  | .3  | .1  | .5  | .0  | .0   | 10.1  |              |
|              | 22+        | .2   | .2   | .1   | *   | *   | .1  | .0  | .0  | .0  | .0   | .6    |              |
|              | TOT %      | 6.8  | 13.5 | 4.2  | 1.0 | .7  | 1.0 | .6  | 1.5 | .0  | .8   | 30.0  |              |
| 10+          | 0-3        | .8   | 1.3  | .8   | .5  | .3  | .3  | .3  | .4  | .0  | 1.7  | 6.5   |              |
|              | 4-10       | 10.2 | 17.8 | 4.9  | 1.2 | 1.3 | 1.0 | .9  | 2.6 | .0  | .0   | 39.8  |              |
|              | 11-21      | 5.1  | 9.0  | 1.3  | .3  | .2  | .2  | .3  | 1.1 | .0  | .0   | 17.6  |              |
|              | 22+        | .1   | .2   | .0   | .0  | .0  | .0  | .1  | *   | .0  | .0   | .3    |              |
|              | TOT %      | 16.2 | 28.2 | 7.0  | 2.0 | 1.8 | 1.6 | 1.5 | 4.1 | .0  | 1.7  | 64.1  |              |
| TOT OBS      |            |      |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            | 24.2 | 44.4 | 11.9 | 3.3 | 2.5 | 2.8 | 2.3 | 6.0 | .0  | 2.6  | 100.0 | 2870         |



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15.5N 24.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .0         | .4         | .8         | 8.0        | 19.5         | 6.1          | 3.8          | .8           | .4           | .8    | 40.6  | 59.4               | 261          |
| 06009         | .5         | .5         | 1.9        | 7.9        | 18.2         | 10.7         | 5.6          | 1.4          | .9           | .0    | 47.7  | 52.3               | 214          |
| 12015         | .0         | .0         | .0         | 5.6        | 20.6         | 5.2          | 4.8          | .8           | .4           | 2.0   | 39.3  | 60.7               | 252          |
| 18021         | .0         | .4         | .8         | 7.8        | 15.2         | 6.2          | 3.3          | 1.6          | .4           | .8    | 36.6  | 63.4               | 243          |
| TOT           | 1          | 3          | 8          | 71         | 179          | 67           | 42           | 11           | 5            | 9     | 396   | 574                | 970          |
| PCT           | .1         | .3         | .8         | 7.3        | 18.5         | 6.9          | 4.3          | 1.1          | .5           | .9    | 40.8  | 59.2               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | 1.3   | .3  | 3.2 | 32.5 | 62.6 | 631          |
| 06009         | .1   | 3.4   | .5  | 2.4 | 33.4 | 60.2 | 844          |
| 12015         | .3   | 2.5   | .5  | 1.3 | 26.7 | 68.6 | 599          |
| 18021         | .0   | 3.3   | .8  | 3.0 | 28.7 | 64.2 | 858          |
| TOT           | 4    | 80    | 16  | 74  | 393  | 1865 | 2932         |
| PCT           | .1   | 2.7   | .5  | 2.5 | 30.5 | 63.6 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .0           | 1.2        | 12.0        | 31.5            | 56.6              | 251          |
| 06009         | .5           | 2.9        | 12.1        | 36.7            | 51.2              | 207          |
| 12015         | .0           | .0         | 7.0         | 34.3            | 58.7              | 242          |
| 18021         | .0           | .8         | 11.0        | 27.5            | 61.4              | 236          |
| TOT           | 1            | 11         | 98          | 303             | 535               | 936          |
| PCT           | .1           | 1.2        | 10.5        | 32.4            | 57.2              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .1    | .1    | .0    | .0    | .0     | 2            | .2          |
| 85/89  | .0   | .0    | .0    | .1    | .2    | 1.2   | .3    | .1     | 19           | 1.9         |
| 80/84  | .0   | .0    | .0    | .3    | 3.4   | 10.3  | 12.1  | 1.4    | 273          | 27.6        |
| 75/79  | .0   | .0    | .0    | .1    | 2.8   | 22.6  | 31.3  | 10.4   | 664          | 67.2        |
| 70/74  | .0   | .0    | .0    | .0    | .0    | 1.0   | 1.2   | .8     | 30           | 3.0         |
| TOTAL  | 0    | 0     | 0     | 6     | 65    | 347   | 444   | 126    | 988          | 100.0       |
| PCT    | .0   | .0    | .0    | .6    | 6.6   | 35.1  | 44.9  | 12.8   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW  | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|-----|-----|------|
| 90/94 | .1   | *    | .0  | .0  | .0  | .0  | .0  | .1  | .0  | .0   |
| 85/89 | 1.1  | .5   | .1  | .0  | .0  | .1  | .1  | .1  | .0  | .0   |
| 80/84 | 7.5  | 9.2  | 3.1 | 1.3 | 1.1 | .8  | 1.3 | 2.4 | .0  | .9   |
| 75/79 | 18.7 | 32.5 | 5.2 | 1.4 | 1.5 | .9  | 1.6 | 3.6 | .0  | 1.7  |
| 70/74 | 1.3  | 1.0  | .2  | .0  | .0  | .1  | .0  | .1  | .0  | .3   |
| TOTAL | 28.7 | 43.2 | 8.5 | 2.7 | 2.6 | 2.0 | 3.0 | 6.4 | .0  | 2.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 86  | 82  | 80  | 77  | 75 | 73 | 70  | 77.4 | 1141         |
| 06009         | 86  | 82  | 81  | 77  | 74 | 73 | 71  | 77.4 | 1836         |
| 12015         | 92  | 87  | 85  | 80  | 77 | 75 | 72  | 80.1 | 1048         |
| 18021         | 92  | 86  | 83  | 79  | 76 | 74 | 72  | 79.1 | 1765         |
| TOT           | 92  | 86  | 83  | 78  | 75 | 73 | 70  | 78.4 | 5790         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .7    | 1.5   | 27.5  | 56.0  | 14.3   | 83   | 273          |
| 06009         | .0   | .0    | 1.6   | 27.8  | 44.1  | 26.5   | 84   | 245          |
| 12015         | .0   | 1.6   | 13.4  | 40.9  | 40.5  | 3.6    | 78   | 247          |
| 18021         | .0   | .0    | 10.0  | 44.2  | 38.6  | 7.2    | 79   | 251          |
| TOT           | 0    | 6     | 66    | 355   | 458   | 131    | 81   | 1016         |

PERIOD: (PRIMARY) 1896-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT<br>FOG | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|------------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | 1          | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | .2       | 4          | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .0       | .2       | .2       | 6          | .0       | .5        |
| 6                  | .0       | .0       | .0       | .2       | .2       | .0       | 5          | .0       | .4        |
| 5                  | .0       | .0       | .5       | .5       | .3       | .0       | 16         | .1       | 1.1       |
| 4                  | .0       | .2       | .9       | 1.0      | .5       | .0       | 34         | .2       | 2.4       |
| 3                  | .0       | .2       | 1.4      | 2.1      | .0       | .0       | 49         | .3       | 3.4       |
| 2                  | .0       | .2       | 3.4      | 2.6      | .2       | .0       | 84         | .5       | 5.8       |
| 1                  | .1       | .8       | 7.3      | 3.2      | .0       | .0       | 151        | 1.1      | 10.3      |
| 0                  | .0       | 2.9      | 15.6     | 3.2      | .1       | .0       | 288        | 1.7      | 19.9      |
| -1                 | .2       | 5.2      | 18.0     | 1.5      | .0       | .0       | 330        | 1.4      | 23.4      |
| -2                 | .0       | 4.7      | 8.6      | .6       | .1       | .0       | 187        | .2       | 13.9      |
| -3                 | .0       | 2.0      | 3.8      | .1       | .0       | .0       | 78         | .1       | 5.8       |
| -4                 | .0       | 1.4      | 2.1      | .2       | .0       | .0       | 48         | .1       | 3.5       |
| -5                 | .0       | 1.2      | 1.4      | .1       | .0       | .0       | 35         | .0       | 2.6       |
| -6                 | .0       | .4       | .1       | .0       | .0       | .0       | 6          | .0       | .5        |
| -7/-8              | .0       | .2       | .4       | .1       | .0       | .0       | 8          | .0       | .6        |
| -9/-10             | .0       | .1       | .0       | .0       | .0       | .0       | 1          | .0       | .1        |
| TOTAL              | 3        | 257      | 841      | 203      | 21       | 6        | 1331       | 74       | 1257      |
| PCT                | .2       | 19.3     | 63.2     | 15.3     | 1.6      | .3       | 100.0      | 5.6      | 94.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .2  | 1.2  | .0    | .0    | .0    | .0  | 1.4  | .9  | 1.5  | .0    | .0    | .0    | .0  | 2.4  |
| 1-2     | .7  | 8.6  | 2.9   | .0    | .0    | .0  | 12.2 | .5  | 10.3 | 4.9   | .0    | .0    | .0  | 15.6 |
| 3-4     | .2  | 3.4  | 4.9   | .0    | .0    | .0  | 8.7  | .0  | 6.8  | 7.2   | .2    | .0    | .0  | 14.2 |
| 5-6     | .0  | .6   | 2.4   | .0    | .0    | .0  | 3.1  | .0  | 1.9  | 7.1   | .0    | .0    | .0  | 8.9  |
| 7       | .0  | .0   | 1.5   | .1    | .0    | .0  | 1.6  | .0  | .2   | 2.0   | .0    | .0    | .0  | 2.2  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | 1.1   | .0    | .0    | .0  | 1.1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 14.1 | 11.7  | .1    | .0    | .0  | 27.0 | 1.5 | 20.7 | 22.3  | .2    | .0    | .0  | 44.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .7   | .0    | .0    | .0    | .0  | .9  | .5  | .0   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .5  | 3.0  | .5    | .0    | .0    | .0  | 4.0 | .4  | 1.4  | .0    | .0    | .0    | .0  | 1.7 |
| 3-4     | .0  | 1.1  | 1.1   | .0    | .0    | .0  | 2.2 | .0  | .2   | .2    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .0   | 1.3   | .0    | .0    | .0  | 1.3 | .0  | .2   | .2    | .0    | .0    | .0  | .4  |
| 7       | .0  | .0   | .5    | .0    | .1    | .0  | .6  | .0  | .0   | .4    | .0    | .0    | .0  | .4  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 4.8  | 3.4   | .0    | .1    | .0  | 9.1 | .9  | 1.6  | .7    | .0    | .0    | .0  | 3.3 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .1   | .0    | .0    | .0    | .0  | .3  | .0  | .3   | .0    | .0    | .0    | .0  | .3  |
| 1-2     | .1  | 1.0  | .0    | .0    | .0    | .0  | 1.1 | .0  | .6   | .0    | .0    | .0    | .0  | .7  |
| 3-4     | .0  | .9   | .0    | .0    | .0    | .0  | .9  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |
| 5-6     | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .0  | .2   | .2    | .0    | .0    | .0  | .4  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 2.2  | .0    | .0    | .0    | .0  | 2.5 | .0  | 1.1  | .5    | .0    | .0    | .0  | 1.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .2  | .1   | .0    | .0    | .0    | .0  | .3  | .2  | .3   | .0    | .0    | .0    | .0  | .5  |           |
| 1-2     | .2  | .7   | .0    | .0    | .0    | .0  | .9  | .5  | 2.2  | .7    | .0    | .0    | .0  | 3.5 |           |
| 3-4     | .0  | .9   | .0    | .2    | .0    | .0  | 1.1 | .0  | .9   | .7    | .0    | .0    | .0  | 1.6 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .6    | .0    | .0    | .0  | .6  |           |
| 7       | .0  | .0   | .2    | .0    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .2    | .0    | .0    | .0  | .2  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .4  | 1.7  | .2    | .2    | .0    | .0  | 2.4 | .7  | 3.5  | 2.2   | .0    | .0    | .0  | 6.5 | 97.3      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 5.6 | 4.3  | .0    | .0    | .0    | .0  | 9.9   |         |
| 1-2     | 3.2 | 27.6 | 8.8   | .0    | .0    | .0  | 39.7  |         |
| 3-4     | .5  | 14.1 | 14.1  | .4    | .0    | .0  | 29.1  |         |
| 5-6     | .0  | 3.1  | 11.6  | .0    | .0    | .0  | 14.6  |         |
| 7       | .0  | .2   | 4.5   | .2    | .2    | .0  | 5.1   |         |
| 8-9     | .0  | .0   | 1.6   | .0    | .0    | .0  | 1.6   |         |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 9.4 | 49.3 | 40.6  | .5    | .2    | .0  | 100.0 | 554     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.6 | 9.7  | 13.9 | 7.2  | 1.6  | .8  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 277   | 3        |
| 6-7          | .0  | 1.0  | 9.9  | 12.0 | 5.3  | 1.1 | .3    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 235   | 5        |
| 8-9          | .0  | .6   | 2.5  | 4.4  | 2.5  | .6  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 87    | 5        |
| 10-11        | .0  | 1.3  | .9   | .6   | .5   | .5  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 31    | 4        |
| 12-13        | .0  | .0   | .0   | .5   | .3   | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 7     | 6        |
| >13          | .0  | .0   | .0   | .0   | .1   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3     | 8        |
| INDET        | 3.0 | 4.7  | 5.8  | 3.4  | 1.6  | .5  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 151   | 3        |
| TOTAL        | 37  | 137  | 261  | 223  | 95   | 30  | 7     | 1  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 791   | 4        |
| PCT          | 4.7 | 17.3 | 33.0 | 28.2 | 12.0 | 3.8 | .9    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



SEPTEMBER

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

AREA 0007 CAPE VEKDE ISLANDS  
15.5N 24.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                     |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|---------------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FDG WD PCPN | FDG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG |
| N        | 1.7                | .6        | .0   | .0        | .0   | .0              | .0   | 2.8                     | 1.8            | 1.3       | 3.4         | .0                  | 2.3        | .0                  |
| NE       | .4                 | 1.2       | .2   | .0        | .0   | .0              | .2   | 2.0                     | 1.6            | .4        | 3.9         | .0                  | 2.6        | .2                  |
| E        | 2.9                | 2.8       | 1.0  | .0        | .0   | .0              | .0   | 6.7                     | 1.8            | 2.3       | 11.9        | .0                  | 2.0        | .0                  |
| SE       | 3.4                | 7.7       | 1.7  | .0        | .0   | .0              | .0   | 12.8                    | 8.5            | 2.1       | 5.1         | .0                  | 1.7        | .0                  |
| S        | 4.0                | 4.5       | .0   | .0        | .0   | .0              | .0   | 8.5                     | .0             | 2.3       | 4.0         | .0                  | 2.3        | .0                  |
| SW       | 1.8                | 19.8      | 8.1  | .0        | .0   | .0              | .0   | 28.8                    | 3.6            | 3.6       | .9          | .0                  | .0         | .0                  |
| W        | 7.1                | 4.8       | 2.4  | .0        | .0   | .0              | .0   | 11.9                    | .0             | 3.2       | .0          | .0                  | .0         | .0                  |
| NW       | 4.7                | 1.9       | .0   | .0        | .0   | .0              | .0   | 6.5                     | .0             | 5.6       | 1.9         | .0                  | 1.9        | 1.9                 |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0                  |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | 3.4        | .0                  |
| TOT PCT  | 1.7                | 2.2       | .7   | .0        | .0   | .0              | .1   | 4.5                     | 1.8            | 1.4       | 4.7         | .0                  | 2.3        | .2                  |
| TOT OBS: | 1330               |           |      |           |      |                 |      |                         |                |           |             |                     |            | 85.5                |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                     |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|---------------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FDG WD PCPN | FDG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG |
| 00003      | 1.0                | 1.0       | .7   | .0        | .0   | .0              | .0   | 2.6                     | 2.9            | 2.3       | 2.6         | .0                  | 1.3        | .0                  |
| 06009      | 2.8                | 4.0       | .5   | .0        | .0   | .0              | .3   | 7.3                     | 1.0            | 2.3       | 4.5         | .0                  | 1.8        | .3                  |
| 12015      | 1.3                | 1.3       | .7   | .0        | .0   | .0              | .0   | 3.3                     | 1.0            | .0        | 3.6         | .0                  | 3.3        | .3                  |
| 18021      | 1.3                | 2.1       | .8   | .0        | .0   | .0              | .0   | 4.2                     | 2.4            | .8        | 8.4         | .0                  | 2.6        | .0                  |
| TOT PCT    | 1.7                | 2.2       | .6   | .0        | .0   | .0              | .1   | 4.5                     | 1.8            | 1.4       | 5.0         | .0                  | 2.2        | .1                  |
| TOT OBS:   | 1391               |           |      |           |      |                 |      |                         |                |           |             |                     |            | 85.3                |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    |
| N        | 1.3                | 9.0  | 7.0   | .5    | .0    | .0  |      | 17.9      | 10.2     |          | 18.1       | 12.3  | 19.3  | 18.9  | 24.7  | 15.3  | 20.4  |
| NE       | 2.3                | 20.5 | 22.0  | 2.5   | .0    | .0  |      | 47.3      | 11.5     |          | 50.0       | 46.2  | 45.5  | 47.2  | 45.9  | 49.0  | 48.9  |
| E        | 1.4                | 8.0  | 6.7   | 1.0   | .0    | .0  |      | 17.1      | 10.9     |          | 11.0       | 21.9  | 15.9  | 17.1  | 9.7   | 21.1  | 15.8  |
| SE       | .7                 | 2.6  | 1.2   | .2    | .0    | .0  |      | 4.7       | 9.1      |          | 3.3        | 6.8   | 4.5   | 4.8   | 4.6   | 4.7   | 4.5   |
| S        | .7                 | 1.1  | .7    | .2    | .0    | .0  |      | 2.7       | 9.3      |          | 5.3        | 2.9   | 2.7   | 2.8   | 3.4   | 2.1   | 2.0   |
| SW       | .3                 | 1.1  | .5    | .1    | .0    | .0  |      | 2.1       | 9.3      |          | 2.9        | 1.7   | 2.1   | 2.1   | 1.5   | 2.2   | 2.5   |
| W        | .4                 | 1.2  | .3    | .0    | .0    | .0  |      | 1.9       | 7.6      |          | 2.9        | 1.4   | 1.9   | 1.5   | 2.6   | 1.7   | 1.9   |
| NW       | .6                 | 2.1  | .8    | .1    | .0    | .0  |      | 3.6       | 8.2      |          | 3.6        | 3.3   | 4.3   | 3.9   | 3.8   | 2.9   | 4.1   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.7                |      |       |       |       |     |      | 2.7       | .0       |          | 2.9        | 3.5   | 3.8   | 1.8   | 3.8   | 1.7   | 2.8   |
| TOT OBS  | 596                | 2618 | 2246  | 264   | 3     | 0   | 5727 |           | 10.4     |          | 411        | 630   | 1074  | 738   | 453   | 631   | 976   |
| TOT PCT  | 10.4               | 45.7 | 39.2  | 4.6   | .1    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    |
| N        | 4.7                | 10.9 | 2.2   | .1    | .0  |           |          | 17.9     | 10.2       | 14.6  | 19.1  | 19.2  |
| NE       | 9.0                | 29.1 | 8.8   | .3    | .0  |           |          | 47.3     | 11.5       | 47.7  | 46.2  | 47.7  |
| E        | 4.4                | 9.2  | 3.3   | .2    | .0  |           |          | 17.1     | 10.9       | 17.6  | 16.4  | 16.3  |
| SE       | 2.0                | 2.1  | .6    | .0    | .0  |           |          | 4.7      | 9.1        | 5.5   | 4.6   | 4.7   |
| S        | 1.3                | 1.0  | .4    | .0    | .0  |           |          | 2.7      | 9.3        | 3.8   | 2.7   | 2.7   |
| SW       | .9                 | .9   | .3    | .0    | .0  |           |          | 2.1      | 9.3        | 2.2   | 2.1   | 1.5   |
| W        | .9                 | .8   | .1    | .0    | .0  |           |          | 1.9      | 7.6        | 2.0   | 1.7   | 2.1   |
| NW       | 1.7                | 1.6  | .2    | .1    | .0  |           |          | 3.6      | 8.2        | 3.4   | 4.1   | 3.3   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           |          | .0       | .0         | .0    | .0    | .0    |
| CALM     | 2.7                |      |       |       |     |           |          | 2.7      | .0         | 3.3   | 3.0   | 2.6   |
| TOT OBS  | 1582               | 3181 | 916   | 46    | 2   | 5727      |          | 10.4     |            | 1041  | 1812  | 1084  |
| TOT PCT  | 27.6               | 55.5 | 16.0  | .8    | .0  |           |          | 100.0    |            | 100.0 | 100.0 | 100.0 |

SEPTEMBER

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1894-1973

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000 | 3.3  | 8.4 | 47.5 | 36.9               | 3.8   | .2    | .0  | 10.1 | 100.0    | 1041      |
| 0600 | 3.0  | 8.6 | 46.9 | 37.7               | 3.8   | .1    | .0  | 10.0 | 100.0    | 1812      |
| 1200 | 2.6  | 6.5 | 45.8 | 39.1               | 5.9   | .0    | .0  | 10.7 | 100.0    | 1084      |
| 1800 | 2.3  | 7.0 | 43.4 | 42.1               | 5.1   | .0    | .0  | 10.8 | 100.0    | 1790      |
| TOT  | 157  | 439 | 2618 | 2246               | 264   | 3     | 0   | 10.4 |          | 5727      |
| PCT  | 2.7  | 7.7 | 45.7 | 39.2               | 4.6   | .1    | .0  | 10.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 10 | TOTAL CLOUD OBS | MEAN CLOUD COVER |
|----------|------|------|------|--------|-----------------|------------------|
| N        | 6.2  | 5.2  | 7.2  | 2.6    |                 | 4.2              |
| NE       | 14.8 | 10.3 | 17.1 | 7.6    |                 | 4.3              |
| E        | 4.1  | 1.2  | 3.0  | 1.1    |                 | 3.8              |
| SE       | .9   | .9   | 1.7  | .7     |                 | 4.6              |
| S        | 1.3  | 1.6  | 1.0  | .2     |                 | 3.6              |
| SW       | .2   | .5   | .7   | .6     |                 | 5.6              |
| W        | 1.0  | .3   | .5   | .5     |                 | 3.5              |
| NW       | .4   | 1.4  | 1.7  | .6     |                 | 4.8              |
| VAR      | .0   | .0   | .0   | .0     |                 | .0               |
| CALM     | 1.1  | .9   | .6   | .4     |                 | 3.6              |
| TOT OBS  | 245  | 181  | 273  | 118    | 817             | 4.2              |
| TOT PCT  | 30.0 | 22.2 | 33.4 | 14.4   | 100.0           |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .0  | .0  | .3  | 1.2 | 2.1  | 1.4  | .6   | .1   | .1   | .2    | 15.2            |           |
| NE      | .0  | .0  | .5  | 2.5 | 8.3  | 3.2  | 1.2  | .6   | .1   | .3    | 33.3            |           |
| E       | .0  | .0  | .3  | .5  | 1.3  | .6   | .0   | .0   | .1   | .0    | 6.6             |           |
| SE      | .0  | .0  | .0  | .6  | .7   | .1   | .1   | .0   | .0   | .0    | 2.7             |           |
| S       | .0  | .0  | .0  | .2  | .3   | .1   | .2   | .1   | .0   | .0    | 3.2             |           |
| SW      | .0  | .0  | .0  | .4  | .6   | .2   | .0   | .0   | .0   | .0    | .7              |           |
| W       | .0  | .0  | .2  | .1  | .4   | .0   | .0   | .0   | .0   | .0    | 1.6             |           |
| NW      | .0  | .0  | .2  | .6  | .6   | .0   | .0   | .0   | .0   | .0    | 2.7             |           |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM    | .0  | .0  | .0  | .0  | .2   | .2   | .0   | .0   | .0   | .1    | 2.3             |           |
| TOT OBS | 0   | 11  | 46  | 118 | 54   | 16   | 7    | 2    | 5    | 558   | 817             |           |
| TOT PCT | .0  | .0  | 1.3 | 5.6 | 14.4 | 6.6  | 2.0  | .9   | .2   | .6    | 68.3            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NM >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         | VSBY (NM) |           |           | VSBY (NM)  |         |  |
|----------------|-----------|---------|---------|-----------|-----------|-----------|------------|---------|--|
|                | = OR >10  | = OR >5 | = OR >2 | = OR >1   | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |  |
| = OR >6500     | .6        | .8      | .8      | .8        | .8        | .8        | .8         | .8      |  |
| = OR >5000     | 1.1       | 1.6     | 1.6     | 1.6       | 1.6       | 1.6       | 1.6        | 1.6     |  |
| = OR >3500     | 2.7       | 3.8     | 3.9     | 3.9       | 3.9       | 3.9       | 3.9        | 3.9     |  |
| = OR >2000     | 8.5       | 10.0    | 10.1    | 10.2      | 10.2      | 10.2      | 10.2       | 10.2    |  |
| = OR >1000     | 19.9      | 23.7    | 24.3    | 24.4      | 24.4      | 24.4      | 24.4       | 24.4    |  |
| = OR >600      | 24.3      | 29.6    | 30.2    | 30.3      | 30.3      | 30.3      | 30.3       | 30.3    |  |
| = OR >300      | 25.0      | 30.6    | 31.3    | 31.4      | 31.6      | 31.6      | 31.6       | 31.6    |  |
| = OR >150      | 25.0      | 30.6    | 31.3    | 31.4      | 31.6      | 31.6      | 31.6       | 31.6    |  |
| = OR >0        | 25.0      | 30.6    | 31.3    | 31.4      | 31.6      | 31.6      | 31.6       | 31.6    |  |
| TOTAL          | 212       | 260     | 266     | 267       | 268       | 268       | 268        | 268     |  |

TOTAL NUMBER OF OBS: 849

PCT FREQ NH <5/8: 68.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | 9  | TOTAL OBS |
|--|------|------|------|------|------|-----|-----|-----|------|----|-----------|
|  | 10.2 | 14.8 | 17.6 | 15.3 | 10.8 | 8.1 | 7.0 | 6.2 | 10.1 | .0 | 904       |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

SEPTEMBER

AREA 0007 CAPE VERDE ISLANDS  
15.5N 24.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | NO PCP | .0   | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .1           |
|              | TOT %  | .0   | .0   | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .1           |
| 1/2<1        | PCP    | .0   | .0   | .2   | .2  | .0  | .0  | .1  | *   | .0  | .0   | .5    | .5           |
|              | NO PCP | .6   | 1.7  | 1.8  | .2  | .1  | .0  | .0  | .1  | .0  | .0   | 4.4   | 4.4          |
|              | TOT %  | .6   | 1.7  | 1.9  | .4  | .1  | .0  | .1  | .1  | .0  | .0   | 4.9   | 4.9          |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .1  | .0  | .0   | .1    | .1           |
|              | NO PCP | .0   | .4   | .2   | .1  | .0  | .0  | .0  | .1  | .0  | .0   | .8    | .8           |
|              | TOT %  | .0   | .4   | .2   | .1  | .0  | .0  | .0  | .2  | .0  | .0   | .8    | .8           |
| 2<5          | PCP    | .2   | *    | .0   | .0  | .1  | .1  | .0  | .1  | .0  | .0   | .5    | .5           |
|              | NO PCP | .2   | .3   | .1   | .0  | .1  | *   | .0  | .0  | .0  | .0   | .7    | .7           |
|              | TOT %  | .4   | .3   | .1   | .0  | .2  | .1  | .0  | .1  | .0  | .0   | 1.1   | 1.1          |
| 5<10         | PCP    | .3   | .6   | .6   | .3  | .1  | .4  | .2  | .0  | .0  | .0   | 2.3   | 2.3          |
|              | NO PCP | 6.0  | 14.5 | 5.8  | 1.1 | .7  | .5  | .8  | 1.1 | .0  | .4   | 30.9  | 30.9         |
|              | TOT %  | 6.3  | 15.0 | 6.4  | 1.4 | .7  | .9  | 1.0 | 1.1 | .0  | .4   | 33.2  | 33.2         |
| 10+          | PCP    | .1   | .4   | .3   | .1  | .2  | .2  | .0  | .1  | .0  | .0   | 1.2   | 1.2          |
|              | NO PCP | 12.5 | 29.0 | 5.9  | 2.5 | 2.2 | .9  | 1.2 | 2.6 | .0  | 1.8  | 58.6  | 58.6         |
|              | TOT %  | 12.6 | 29.4 | 6.2  | 2.5 | 2.3 | 1.1 | 1.2 | 2.6 | .0  | 1.8  | 59.8  | 59.8         |
| TOT OBS      |        |      |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |        |      |      |      |     |     |     |     |     |     |      |       |              |
|              |        | 19.9 | 46.8 | 14.9 | 4.4 | 3.3 | 2.1 | 2.4 | 4.0 | .0  | 2.2  | 100.0 | 1330         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|-----|-----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | *     | *            |
|              | 4-10       | .0   | .0   | *    | *   | .0  | .0  | .0  | .0  | .0  | .0   | *     | *            |
|              | 11-21      | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | .0   | .0   | .1   | *   | .0  | .0  | .0  | .0  | .0  | .0   | .1    | .1           |
| 1/2<1        | 0-3        | .1   | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .1   | .3    | .3           |
|              | 4-10       | .1   | .1   | .2   | .1  | .0  | .0  | *   | .0  | .0  | .0   | .5    | .5           |
|              | 11-21      | .1   | .6   | .6   | .1  | *   | .0  | *   | .1  | .0  | .0   | 1.5   | 1.5          |
|              | 22+        | .0   | .1   | .1   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .2    | .2           |
|              | TOT %      | .4   | .9   | .9   | .2  | *   | .0  | .1  | .1  | .0  | .1   | 2.6   | 2.6          |
| 1<2          | 0-3        | *    | .1   | .1   | .0  | .0  | .0  | .0  | *   | .0  | .0   | .2    | .2           |
|              | 4-10       | .0   | .1   | *    | *   | .0  | .0  | .0  | .1  | .0  | .0   | .2    | .2           |
|              | 11-21      | .0   | .1   | *    | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .1    | .1           |
|              | 22+        | .0   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   | .0    | .0           |
|              | TOT %      | *    | .2   | .1   | *   | .0  | .0  | .0  | .1  | .0  | .0   | .5    | .5           |
| 2<5          | 0-3        | *    | .1   | .0   | .0  | .1  | *   | .0  | .0  | .0  | .1   | .2    | .2           |
|              | 4-10       | .2   | .8   | .2   | .1  | *   | *   | *   | *   | .0  | .0   | 1.4   | 1.4          |
|              | 11-21      | .2   | .5   | .1   | *   | .1  | *   | .1  | *   | .0  | .0   | 1.0   | 1.0          |
|              | 22+        | .1   | .2   | .1   | .0  | .1  | *   | .0  | .0  | .0  | .0   | .4    | .4           |
|              | TOT %      | .5   | 1.5  | .3   | .1  | .2  | .1  | .1  | .1  | .0  | .1   | 3.0   | 3.0          |
| 5<10         | 0-3        | .3   | .5   | .5   | .2  | .3  | .1  | .1  | .1  | .0  | .7   | 3.0   | 3.0          |
|              | 4-10       | 2.4  | 5.5  | 2.3  | .7  | .3  | .3  | .4  | .5  | .0  | .0   | 12.4  | 12.4         |
|              | 11-21      | 2.7  | 6.9  | 1.9  | .5  | .3  | .2  | .1  | .2  | .0  | .0   | 12.7  | 12.7         |
|              | 22+        | .2   | .9   | .2   | *   | .0  | .0  | *   | *   | .0  | .0   | 1.5   | 1.5          |
|              | TOT %      | 5.7  | 13.8 | 4.9  | 1.4 | .9  | .6  | .6  | .9  | .0  | .7   | 29.6  | 29.6         |
| 10+          | 0-3        | 1.1  | 1.4  | .8   | .5  | .6  | .2  | .1  | .3  | .0  | 1.8  | 6.8   | 6.8          |
|              | 4-10       | 7.3  | 15.0 | 4.9  | 1.8 | 1.0 | .6  | .9  | 1.9 | .0  | .0   | 33.3  | 33.3         |
|              | 11-21      | 5.0  | 13.5 | 2.0  | .5  | .6  | .3  | .1  | .6  | .0  | .0   | 22.7  | 22.7         |
|              | 22+        | .3   | .8   | .1   | .1  | *   | .0  | .0  | .1  | .0  | .0   | 1.5   | 1.5          |
|              | TOT %      | 13.8 | 30.7 | 7.5  | 2.9 | 2.2 | 1.0 | 1.1 | 2.8 | .0  | 1.8  | 64.3  | 64.3         |
| TOT OBS      |            |      |      |      |     |     |     |     |     |     |      |       |              |
| TOT PCT      |            |      |      |      |     |     |     |     |     |     |      |       |              |
|              |            | 20.3 | 47.2 | 14.2 | 4.7 | 3.3 | 1.8 | 1.9 | 3.9 | .0  | 2.7  | 100.0 | 2812         |



## SEPTEMBER

PERIOD: (PRIMARY) 1992-1973  
(OVER-ALL) 1854-1973AREA 0007 CAPE VERDE ISLANDS  
19.5N 24.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003          | .0         | .0         | 1.9        | 6.6        | 11.7         | 5.2          | .9           | 1.4          | .0           | .9    | 28.6  | 71.4                | 213          |
| 06009          | .0         | .0         | 1.4        | 4.5        | 17.3         | 5.9          | 2.3          | .5           | .5           | .9    | 33.2  | 66.8                | 220          |
| 12015          | .0         | .0         | .4         | 5.3        | 13.2         | 6.6          | 2.2          | .4           | .4           | .4    | 28.9  | 71.1                | 228          |
| 18021          | .0         | .0         | 1.3        | 6.1        | 11.8         | 6.6          | 3.1          | .9           | .0           | .0    | 29.8  | 70.2                | 228          |
| TOT            | 0          | 0          | 11         | 50         | 120          | 54           | 19           | 7            | 2            | 5     | 268   | 621                 | 889          |
| PCT            | .0         | .0         | 1.2        | 5.6        | 13.5         | 6.1          | 2.1          | .8           | .2           | .6    | 30.1  | 69.9                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSAY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<3 | 3<4  | 4<5  | 5<6   | 6<7 | 7<8 | 8<9 | 9<10 | 10+ | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|-------|-----|-----|-----|------|-----|--------------|
| 00003          | .2   | 1.4   | .4  | 2.3 | 31.6 | 64.1 | 56.0  |     |     |     |      |     | 56.0         |
| 06009          | .0   | 3.0   | .8  | 2.8 | 31.5 | 61.8 | 85.9  |     |     |     |      |     | 85.9         |
| 12015          | .0   | 2.2   | .2  | 3.2 | 24.9 | 69.6 | 59.9  |     |     |     |      |     | 59.9         |
| 18021          | .1   | 3.6   | .7  | 3.3 | 29.6 | 62.7 | 85.7  |     |     |     |      |     | 85.7         |
| TOT            | 2    | 78    | 16  | 84  | 851  | 1844 | 2875  |     |     |     |      |     | 2875         |
| PCT            | .1   | 2.7   | .6  | 2.9 | 29.6 | 64.1 | 100.0 |     |     |     |      |     | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSAY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .0            | 2.0        | 9.9         | 20.7            | 69.5               | 203          |
| 06009          | .0            | 1.5        | 7.3         | 28.2            | 64.6               | 206          |
| 12015          | .0            | .5         | 6.3         | 23.4            | 70.3               | 222          |
| 18021          | .0            | 1.4        | 9.6         | 22.5            | 67.9               | 218          |
| TOT            | 0             | 11         | 70          | 201             | 578                | 849          |
| PCT            | .0            | 1.3        | 8.2         | 23.7            | 68.1               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | .1    | .0    | .0    | .0     | 1            | .1          |
| 85/89  | .0   | .0    | .0    | .1    | .7    | 1.2   | .3    | .0     | 21           | 2.4         |
| 80/84  | .0   | .0    | .0    | .0    | 2.9   | 13.4  | 21.2  | 4.7    | 375          | 42.2        |
| 75/79  | .0   | .0    | .0    | .0    | 1.0   | 11.5  | 31.6  | 10.8   | 488          | 55.0        |
| 70/74  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .3     | 3            | .3          |
| TOTAL  | 0    | 0     | 0     | 1     | 42    | 232   | 472   | 141    | 888          | 100.0       |
| PCT    | .0   | .0    | .0    | .1    | 4.7   | 26.1  | 53.2  | 15.9   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E    | SE  | S   | SW  | W   | NW  | VAR | CALM |
|------|------|------|-----|-----|-----|-----|-----|-----|------|
| .1   | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0  | .0   |
| .8   | .7   | .1   | .3  | .2  | .0  | .0  | .2  | .0  | .1   |
| 9.0  | 18.4 | 5.4  | 2.1 | 1.9 | .9  | .9  | 1.8 | .0  | 1.8  |
| 11.4 | 29.0 | 5.0  | 2.1 | 1.8 | 1.0 | 1.7 | 1.9 | .0  | 1.0  |
| .0   | .1   | .2   | .0  | .0  | .0  | .1  | .0  | .0  | .0   |
| 21.3 | 48.2 | 10.7 | 4.5 | 3.9 | 2.0 | 2.7 | 3.8 | .0  | 2.9  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 89  | 83  | 81  | 79  | 76 | 73 | 68  | 78.7 | 1046         |
| 06009          | 87  | 83  | 82  | 79  | 76 | 74 | 68  | 78.7 | 1819         |
| 12015          | 93  | 88  | 86  | 81  | 77 | 76 | 74  | 81.3 | 1048         |
| 18021          | 91  | 87  | 85  | 80  | 77 | 75 | 70  | 80.4 | 1747         |
| TOT            | 93  | 86  | 84  | 80  | 76 | 74 | 68  | 79.7 | 5660         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | .0    | 16.4  | 66.2  | 17.4   | 85   | 219          |
| 06009          | .0   | .0    | 2.8   | 16.1  | 54.8  | 26.2   | 85   | 248          |
| 12015          | .0   | .0    | 9.5   | 42.8  | 36.9  | 10.8   | 80   | 222          |
| 18021          | .0   | .4    | 6.3   | 29.6  | 53.3  | 10.4   | 81   | 240          |
| TOT            | 0    | 1     | 43    | 242   | 491   | 152    | 83   | 929          |

SEPTEMBER

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1894-1973

AREA 0007 CAPE VERDE ISLANDS  
19.5N 24.0W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>58 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FUG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 9/10               | .0       | .0       | .0       | .0       | .0       | .0       | .2       | 3     | .0       | .2        |
| 7/8                | .0       | .0       | .0       | .2       | .5       | .4       | .2       | 15    | .0       | 1.2       |
| 6                  | .0       | .0       | .0       | .2       | .3       | .3       | .0       | 11    | .1       | .8        |
| 5                  | .0       | .0       | .0       | .2       | .6       | .8       | .1       | 21    | .1       | 1.6       |
| 4                  | .0       | .0       | .0       | .1       | 1.1      | .4       | .0       | 20    | .0       | 1.6       |
| 3                  | .0       | .0       | .0       | .6       | 1.7      | .6       | .0       | 38    | .1       | 2.9       |
| 2                  | .0       | .0       | .0       | 2.4      | 4.2      | .2       | .0       | 87    | .2       | 6.6       |
| 1                  | .0       | .0       | .0       | 6.4      | 7.6      | .0       | .0       | 177   | 1.6      | 12.4      |
| 0                  | .0       | .0       | .4       | 15.3     | 6.2      | .1       | .0       | 279   | 1.2      | 20.8      |
| -1                 | .0       | .0       | .7       | 22.0     | 2.8      | .1       | .0       | 325   | 1.2      | 24.5      |
| -2                 | .0       | .0       | 1.4      | 9.9      | 1.0      | .0       | .0       | 156   | .3       | 12.0      |
| -3                 | .0       | .0       | .9       | 4.4      | .2       | .0       | .0       | 70    | .1       | 5.4       |
| -4                 | .1       | .0       | .6       | 2.5      | .0       | .0       | .0       | 41    | .1       | 3.2       |
| -5                 | .0       | .0       | .4       | .6       | .0       | .0       | .0       | 13    | .0       | 1.0       |
| -6                 | .0       | .0       | .0       | .2       | .2       | .0       | .0       | 5     | .0       | .4        |
| -7/-8              | .0       | .1       | .1       | .3       | .0       | .0       | .0       | 6     | .0       | .5        |
| TOTAL              | 1        | 1        | 58       | 829      | 335      | 37       | 6        | 1267  | 62       | 1205      |
| PCT                | .1       | .1       | 4.6      | 65.4     | 26.4     | 2.9      | .5       | 100.0 | 4.9      | 95.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .7  | 1.4  | .4    | .0    | .0    | .0  | 2.5  | .8  | 1.4  | .0    | .0    | .0    | .0  | 2.2  |
| 1-2     | .8  | 4.5  | 2.7   | .0    | .0    | .0  | 8.1  | 1.0 | 11.6 | 4.4   | .0    | .0    | .0  | 17.0 |
| 3-4     | .0  | 3.2  | 3.1   | .0    | .0    | .0  | 6.3  | .0  | 4.9  | 11.9  | .4    | .0    | .0  | 17.1 |
| 5-6     | .0  | .0   | 2.5   | .1    | .0    | .0  | 2.6  | .0  | 1.8  | 6.9   | .4    | .0    | .0  | 9.1  |
| 7       | .0  | .1   | .3    | .0    | .0    | .0  | .5   | .0  | .6   | 1.5   | 1.2   | .0    | .0  | 3.4  |
| 8-9     | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | .0   | .4    | .0    | .0    | .0  | .4   |
| 10-11   | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | .0   | .2    | .0    | .0    | .0  | .2   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.6 | 9.2  | 9.4   | .1    | .0    | .0  | 20.4 | 1.8 | 20.4 | 25.3  | 2.1   | .0    | .0  | 49.6 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | .0   | .0    | .0    | .0    | .0  | .4   | .2  | .4   | .0    | .0    | .0    | .0  | .6  |
| 1-2     | .3  | 3.2  | .3    | .0    | .0    | .0  | 3.9  | .8  | 2.2  | .3    | .0    | .0    | .0  | 2.3 |
| 3-4     | .0  | 1.7  | 1.7   | .0    | .0    | .0  | 3.4  | .0  | 1.5  | .3    | .0    | .0    | .0  | 1.8 |
| 5-6     | .0  | .5   | 1.1   | .2    | .0    | .0  | 1.9  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .5    | .1    | .0    | .0  | .6   | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .2    | .0    | .0  | .2  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .7  | 5.4  | 3.8   | .3    | .0    | .0  | 10.3 | .2  | 4.1  | .4    | .2    | .0    | .0  | 5.0 |

PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .3  | .0   | .0    | .0    | .0    | .0  |  | .3  | *   | .0   | .0    | .0    | .0    | .0  |  | *   |
| 1-2     | .3  | 1.3  | .0    | .0    | .0    | .0  |  | 1.6 | .0  | .9   | .4    | .0    | .0    | .0  |  | 1.3 |
| 3-4     | .0  | .1   | .5    | .0    | .0    | .0  |  | .6  | .0  | *    | .1    | .0    | .0    | .0  |  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .2   | *     | .0    | .0    | .0  |  | .2  |
| 7       | .0  | .0   | .3    | .0    | .0    | .0  |  | .3  | .0  | .0   | .2    | .0    | .0    | .0  |  | .2  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .7  | 1.4  | .8    | .0    | .0    | .0  |  | 2.9 | *   | 1.1  | .7    | .0    | .0    | .0  |  | 1.9 |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |           |
| <1      | .2  | .0   | .0    | .0    | .0    | .0  |  | .2  | .0  | .6   | .0    | .0    | .0    | .0  |  | .6  |           |
| 1-2     | .0  | 1.4  | .0    | .0    | .0    | .0  |  | 1.4 | .0  | 1.3  | *     | .0    | .0    | .0  |  | 1.4 |           |
| 3-4     | .0  | .4   | .3    | .0    | .0    | .0  |  | .8  | .0  | 1.1  | .2    | .0    | .0    | .0  |  | 1.4 |           |
| 5-6     | .0  | .6   | .1    | .0    | .0    | .0  |  | .7  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 7       | .0  | .2   | .0    | .0    | .0    | .0  |  | .2  | .0  | .2   | .0    | .0    | .0    | .0  |  | .2  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |           |
| TOT PCT | .2  | 2.7  | .5    | .0    | .0    | .0  |  | 3.4 | .0  | 3.3  | .3    | .0    | .0    | .0  |  | 3.6 | 97.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.7  | 3.8  | .4    | .0    | .0    | .0  | 11.9  |         |
| 1-2     | 2.9  | 25.9 | 7.7   | .0    | .0    | .0  | 36.5  |         |
| 3-4     | .0   | 12.7 | 17.7  | .4    | .0    | .0  | 30.7  |         |
| 5-6     | .0   | 3.1  | 10.4  | .8    | .0    | .0  | 14.2  |         |
| 7       | .0   | 1.2  | 2.9   | 1.3   | .0    | .0  | 5.4   |         |
| 8-9     | .0   | .0   | .8    | .2    | .0    | .0  | 1.0   |         |
| 10-11   | .0   | .0   | .4    | .0    | .0    | .0  | .4    |         |
| 12      | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 10.6 | 46.6 | 40.1  | 2.7   | .0    | .0  | 100.0 | 521     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.8 | 12.4 | 14.8 | 7.4  | 2.8  | .6  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 280   | 3        |
| 6-7          | .0  | .9   | 10.2 | 9.1  | 5.1  | 2.3 | .6    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 198   | 5        |
| 8-9          | .0  | .3   | 2.0  | 2.7  | 2.1  | .3  | .0    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 53    | 5        |
| 10-11        | .0  | .1   | .6   | 1.1  | .9   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 21    | 5        |
| 12-13        | .0  | .0   | .0   | .3   | .1   | .0  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 5     | 7        |
| >13          | .0  | .0   | .0   | .0   | .3   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2     | 7        |
| INDET        | 3.7 | 4.7  | 7.2  | 3.7  | .6   | .7  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 145   | 3        |
| TOTAL        | 39  | 129  | 245  | 171  | 84   | 28  | 7     | 1  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 704   | 4        |
| PCT          | 5.5 | 18.3 | 34.8 | 24.3 | 11.9 | 4.0 | 1.0   | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1855-1973

OCTOBER

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWK | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
| N                  | 1.0  | .7        | .0   | .0        | .0   | .0              | .0   | 1.7             | 1.1            | 1.1                     | 9.8         | .0                  | 1.4        | .3              | 84.7       |  |
| NE                 | .7   | .8        | .2   | .0        | .0   | .0              | .0   | 1.8             | .6             | 1.2                     | 6.9         | .0                  | 1.9        | .1              | 87.5       |  |
| E                  | 1.8  | 1.6       | .5   | .0        | .0   | .0              | .0   | 4.0             | .7             | 4.9                     | 6.3         | .0                  | 1.3        | .0              | 83.4       |  |
| SE                 | 5.4  | 4.8       | .0   | .0        | .0   | .0              | .0   | 10.2            | 1.8            | 5.4                     | 2.4         | .0                  | 1.2        | 2.4             | 79.0       |  |
| S                  | 9.3  | 14.0      | .0   | .0        | .0   | .0              | .0   | 23.3            | .0             | 14.0                    | .0          | .0                  | .0         | .0              | 72.1       |  |
| SW                 | 3.8  | 3.8       | .0   | .0        | .0   | .0              | .0   | 7.7             | .0             | 7.7                     | 7.7         | .0                  | .0         | .0              | 80.8       |  |
| W                  | 22.2 | 14.8      | .0   | .0        | .0   | .0              | .0   | 37.0            | .0             | 7.4                     | .0          | .0                  | .0         | .0              | 63.0       |  |
| NW                 | 1.7  | 3.4       | .0   | .0        | .0   | .0              | .0   | 5.2             | .0             | 5.2                     | 3.4         | .0                  | .0         | .0              | 87.9       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | 8.3             | 91.7       |  |
| TOT PCT            | 1.2  | 1.2       | .2   | .0        | .0   | .0              | .0   | 2.7             | .7             | 2.0                     | 7.1         | .0                  | 1.6        | .3              | 86.0       |  |
| TOT OBS:           | 1541 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                                 |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|---------------------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO<br>SIG<br>WEA |
| 00003         | 1.3                | .5           | .3   | .0           | .0   | .0                    | .0   | 2.1                | .5                      | 3.2          | 3.4               | .0                        | 2.1           | .5                              | 88.4             |
| 06009         | .7                 | 2.0          | .5   | .0           | .0   | .0                    | .0   | 3.2                | .9                      | 2.3          | 8.8               | .0                        | .5            | .2                              | 84.5             |
| 12015         | 1.2                | .6           | .0   | .0           | .0   | .0                    | .0   | 1.8                | .6                      | .3           | 6.2               | .0                        | 3.2           | .3                              | 87.9             |
| 18021         | 2.2                | 1.4          | .0   | .0           | .0   | .0                    | .0   | 3.6                | .7                      | 2.2          | 8.9               | .0                        | 1.2           | .0                              | 84.1             |
| TOT PCT       | 1.3                | 1.2          | .2   | .0           | .0   | .0                    | .0   | 2.7                | .7                      | 2.0          | 7.0               | .0                        | 1.6           | .3                              | 86.0             |
| TOT OBS:      | 1576               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                                 |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.0                | 8.0  | 6.4   | .3    | .0    | .0  |      | 15.6      | 10.3     |          | 20.0       | 9.8   | 16.8  | 16.4  | 22.9  | 10.4  | 15.4  | 14.3  |
| NE       | 1.8                | 26.4 | 30.0  | 1.8   | .1    | .0  |      | 60.1      | 11.5     |          | 61.2       | 57.3  | 58.1  | 59.0  | 61.2  | 63.2  | 62.7  | 59.2  |
| E        | .6                 | 8.1  | 6.5   | 1.1   | .1    | .0  |      | 16.4      | 11.5     |          | 10.7       | 23.2  | 15.6  | 17.7  | 8.9   | 19.8  | 14.9  | 19.4  |
| SE       | .3                 | 1.7  | .9    | .1    | * .0  | .0  |      | 3.1       | 9.5      |          | 2.3        | 4.5   | 3.3   | 2.8   | 2.7   | 2.7   | 3.2   | 3.2   |
| S        | .2                 | .5   | .1    | .0    | .0    | .0  |      | .8        | 6.5      |          | .4         | 1.3   | 1.3   | .7    | .5    | .6    | .9    | .4    |
| SW       | .1                 | .3   | .2    | * .0  | .0    | .0  |      | .6        | 9.1      |          | .8         | 1.0   | .6    | .4    | .8    | .4    | .5    | .3    |
| W        | .2                 | .2   | .1    | * .0  | .0    | .0  |      | .5        | 8.3      |          | .3         | .5    | .6    | .3    | .6    | .5    | .5    | .5    |
| NW       | .1                 | 1.0  | .3    | .1    | .0    | .0  |      | 1.4       | 8.6      |          | 2.1        | .4    | 1.9   | 1.6   | 1.7   | 1.1   | 1.0   | 1.7   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.3                |      |       |       |       |     |      | 1.3       | .0       |          | 2.2        | 2.0   | 1.8   | .9    | .8    | 1.2   | .9    | 1.1   |
| TOT OBS  | 327                | 2637 | 2556  | 194   | 8     | 0   | 5724 |           | 11.0     |          | 496        | 594   | 1043  | 744   | 497   | 567   | 1025  | 758   |
| TOT PCT  | 5.7                | 46.1 | 44.7  | 3.4   | .1    | .0  |      | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       | 41+ | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 |     |           |          |          | 00         | 06    | 12    | 18    |
| N        | 3.4                | 10.3 | 1.8   | * .0  |     | 15.6      | 10.3     |          | 14.4       | 16.6  | 16.3  | 15.0  |
| NE       | 9.6                | 40.2 | 10.1  | .2 .0 |     | 60.1      | 11.5     |          | 59.1       | 58.5  | 62.3  | 61.2  |
| E        | 3.7                | 9.3  | 3.2   | .3 .0 |     | 16.4      | 11.5     |          | 17.5       | 16.5  | 14.7  | 16.8  |
| SE       | 1.2                | 1.5  | .4    | * .0  |     | 3.1       | 9.5      |          | 3.5        | 3.1   | 2.7   | 3.2   |
| S        | .6                 | .2   | * .0  | .0    |     | .8        | 6.5      |          | .9         | 1.1   | .6    | .7    |
| SW       | .3                 | .2   | .1    | .0 .0 |     | .6        | 9.1      |          | .9         | .5    | .5    | .4    |
| W        | .3                 | .1   | .1    | * .0  |     | .5        | 8.3      |          | .4         | .5    | .5    | .5    |
| NW       | .7                 | .7   | .1    | * .0  |     | 1.4       | 8.6      |          | 1.2        | 1.8   | 1.4   | 1.3   |
| VAR      | .0                 | .0   | .0    | .0 .0 |     | .0        | .0       |          | .0         | .0    | .0    | .0    |
| CALM     | 1.3                |      |       |       |     | 1.3       | .0       |          | 2.1        | 1.5   | 1.0   | 1.0   |
| TOT OBS  | 1201               | 3578 | 910   | 35    | 0   | 5724      |          | 11.0     | 1090       | 1787  | 1064  | 1783  |
| TOT PCT  | 21.0               | 62.5 | 15.9  | .6    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1855-1973

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15.5N 23.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND  | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|-------|-------|-------|-----|-------|----------|-----------|
| 00003 | 2.1  | 5.6 | 48.4 | 40.6  | 3.1   | .1    | .0  | 10.5  | 100.0    | 1090      |
| 00009 | 1.5  | 3.8 | 49.7 | 42.4  | 2.6   | .1    | .0  | 10.6  | 100.0    | 1787      |
| 12015 | 1.0  | 3.7 | 43.2 | 48.0  | 4.0   | .0    | .0  | 11.4  | 100.0    | 1064      |
| 18021 | 1.0  | 4.6 | 42.6 | 47.4  | 4.1   | .3    | .0  | 11.3  | 100.0    | 1783      |
| TOT   | 77   | 250 | 2637 | 2556  | 196   | 8     | 0   | 11.0  |          | 5724      |
| PCT   | 1.3  | 4.4 | 46.1 | 44.7  | 3.4   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 8.2  | 4.6  | 4.6  | 1.7  |           | 3.3              |
| NE       | 23.0 | 14.0 | 18.5 | 8.7  |           | 3.9              |
| E        | 3.2  | 1.9  | 2.8  | 1.7  |           | 4.2              |
| SE       | .4   | .4   | .8   | .8   |           | 5.2              |
| S        | .2   | .1   | .1   | .2   |           | 4.9              |
| SW       | .2   | .2   | .2   | .2   |           | 4.5              |
| W        | .0   | .3   | .1   | .0   |           | 4.2              |
| NW       | .8   | .6   | .3   | .1   |           | 3.2              |
| VAR      | .0   | .0   | .0   | .0   |           | .0               |
| CALM     | .6   | .2   | .1   | .3   |           | 3.4              |
| TOT OBS  | 357  | 218  | 268  | 135  | 978       | 3.8              |
| TOT PCT  | 36.5 | 22.3 | 27.4 | 13.8 | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| .0  | .2  | .1  | .4  | .8   | .8   | .7   | .0   | .0   | .1    | 16.0            |           |
| .0  | .2  | .6  | 2.6 | 4.9  | 3.1  | 1.7  | .8   | .1   | .6    | 49.5            |           |
| .0  | .0  | .1  | .4  | 1.3  | .4   | .1   | .0   | .0   | .1    | 7.2             |           |
| .0  | .1  | .0  | .2  | .4   | .4   | .3   | .2   | .0   | .0    | 1.2             |           |
| .0  | .0  | .0  | .0  | .1   | .0   | .0   | .0   | .0   | .1    | .4              |           |
| .0  | .0  | .0  | .1  | .1   | .0   | .0   | .0   | .0   | .1    | .5              |           |
| .0  | .0  | .0  | .1  | .0   | .0   | .0   | .0   | .0   | .0    | .3              |           |
| .0  | .0  | .0  | .1  | .1   | .1   | .0   | .0   | .0   | .0    | 1.5             |           |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| .0  | .0  | .1  | .1  | .0   | .0   | .0   | .0   | .0   | .0    | 1.0             |           |
| .0  | .5  | .8  | .39 | .76  | .43  | .27  | .10  | .1   | .10   | 759             | 978       |
| .0  | .5  | .8  | 4.0 | 7.8  | 4.4  | 2.8  | 1.0  | .1   | 1.0   | 77.6            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM) | = OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|-----------|---------|-----------|-----------|------------|---------|
| = OR >6500     | .5       | 1.1     | 1.1     | 1.1       | 1.1     | 1.1       | 1.1       | 1.1        | 1.1     |
| = OR >5000     | 1.6      | 2.3     | 2.3     | 2.3       | 2.3     | 2.3       | 2.3       | 2.3        | 2.3     |
| = OR >3500     | 4.0      | 5.1     | 5.1     | 5.1       | 5.1     | 5.1       | 5.1       | 5.1        | 5.1     |
| = OR >2000     | 8.3      | 9.5     | 9.5     | 9.5       | 9.5     | 9.5       | 9.5       | 9.5        | 9.5     |
| = OR >1000     | 14.5     | 16.9    | 17.0    | 17.0      | 17.1    | 17.1      | 17.1      | 17.1       | 17.1    |
| = OR >600      | 17.1     | 20.6    | 20.8    | 20.8      | 20.9    | 20.9      | 20.9      | 20.9       | 20.9    |
| = OR >300      | 17.6     | 21.3    | 21.7    | 21.7      | 21.8    | 21.8      | 21.8      | 21.8       | 21.8    |
| = OR >150      | 17.9     | 21.8    | 22.2    | 22.2      | 22.3    | 22.3      | 22.3      | 22.3       | 22.3    |
| = OR >0        | 17.9     | 21.8    | 22.2    | 22.2      | 22.3    | 22.3      | 22.3      | 22.3       | 22.3    |
| TOTAL          | 178      | 216     | 220     | 220       | 221     | 221       | 221       | 221        | 221     |

TOTAL NUMBER OF OBS: 993

PCT FREQ NH <5/8: 77.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|------|------|------|------|-----|-----|-----|-----|-------|-----------|
| 15.5 | 16.9 | 18.0 | 16.1 | 10.5 | 5.4 | 6.0 | 4.4 | 7.2 | .0    | 1046      |

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1855-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .1   | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | NO PCP | 1.6  | 4.1  | .9   | .1  | .0 | .1 | .0 | .0  | .0  | .0   | 6.6   |              |
|              | TOT %  | 1.6  | 4.2  | .9   | .1  | .0 | .1 | .0 | .0  | .0  | .0   | 6.7   |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .2   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
|              | TOT %  | .1   | .2   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
| 2<5          | PCP    | .0   | *    | *    | .1  | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | NO PCP | .1   | .2   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .4    |              |
|              | TOT %  | .1   | .2   | .1   | .1  | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
| 5<10         | PCP    | .3   | .5   | .3   | .2  | .1 | .1 | .2 | .1  | .0  | .0   | 1.7   |              |
|              | NO PCP | 5.1  | 15.2 | 4.5  | 1.1 | .3 | .3 | .1 | .4  | .0  | .3   | 27.1  |              |
|              | TOT %  | 5.4  | 15.6 | 4.8  | 1.3 | .4 | .3 | .2 | .5  | .0  | .3   | 28.8  |              |
| 10+          | PCP    | *    | .5   | .1   | .0  | .1 | .0 | .0 | .0  | .0  | .0   | .7    |              |
|              | NO PCP | 12.0 | 40.5 | 6.3  | 1.2 | .2 | .5 | .2 | 1.4 | .0  | .5   | 62.8  |              |
|              | TOT %  | 12.0 | 41.0 | 6.4  | 1.2 | .3 | .5 | .2 | 1.4 | .0  | .5   | 63.5  |              |
| TOT OBS      |        |      |      |      |     |    |    |    |     |     |      |       |              |
| TOT PCT      |        |      |      |      |     |    |    |    |     |     |      |       |              |
|              |        | 19.1 | 61.2 | 12.3 | 2.7 | .7 | .8 | .4 | 1.9 | .0  | .8   | 100.0 | 1541         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
| 1/2<1        | 0-3        | .1   | .2   | *    | .0  | .0 | *  | .0 | .0  | .0  | .0   | .3    |              |
|              | 4-10       | .4   | 1.2  | .3   | *   | .0 | .0 | .0 | .0  | .0  | .0   | 1.9   |              |
|              | 11-21      | .3   | .8   | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | 1.3   |              |
|              | 22+        | .0   | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | TOT %      | .8   | 2.2  | .5   | *   | .0 | *  | .0 | .0  | .0  | .0   | 3.6   |              |
| 1<2          | 0-3        | .0   | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 4-10       | .0   | .1   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .2    |              |
|              | 11-21      | .1   | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .2   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .4    |              |
| 2<5          | 0-3        | *    | *    | .0   | .1  | *  | .0 | *  | .0  | .0  | .0   | .2    |              |
|              | 4-10       | .2   | .5   | .1   | .1  | *  | .0 | .0 | .0  | .0  | .0   | .9    |              |
|              | 11-21      | .1   | .3   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
|              | 22+        | .0   | .0   | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .2   | .9   | .2   | .2  | .1 | *  | *  | .0  | .0  | .0   | 1.6   |              |
| 5<10         | 0-3        | .2   | .5   | .2   | .1  | .0 | .0 | *  | .1  | .0  | .3   | 1.5   |              |
|              | 4-10       | 2.7  | 5.9  | 2.0  | .6  | .2 | .1 | .0 | .3  | .0  | .0   | 11.7  |              |
|              | 11-21      | 1.7  | 6.1  | 1.5  | .3  | *  | .1 | .1 | .1  | .0  | .0   | 9.8   |              |
|              | 22+        | .1   | .5   | .1   | *   | .0 | *  | *  | *   | .0  | .0   | .8    |              |
|              | TOT %      | 4.7  | 13.0 | 3.8  | 1.1 | .2 | .2 | .1 | .5  | .0  | .3   | 23.9  |              |
| 10+          | 0-3        | 1.0  | 1.3  | .3   | .2  | .1 | *  | *  | .1  | .0  | .9   | 3.9   |              |
|              | 4-10       | 6.4  | 20.4 | 5.3  | .8  | .1 | .2 | .1 | .8  | .0  | .0   | 34.1  |              |
|              | 11-21      | 5.2  | 22.3 | 3.0  | .3  | .1 | .1 | .1 | .3  | .0  | .0   | 31.4  |              |
|              | 22+        | .2   | .6   | .2   | *   | .0 | .0 | .0 | .0  | .0  | .0   | 1.0   |              |
|              | TOT %      | 12.8 | 44.7 | 8.8  | 1.2 | .3 | .3 | .2 | 1.2 | .0  | .9   | 70.5  |              |
| TOT OBS      |            |      |      |      |     |    |    |    |     |     |      |       |              |
| TOT PCT      |            |      |      |      |     |    |    |    |     |     |      |       |              |
|              |            | 18.6 | 61.1 | 13.4 | 2.5 | .6 | .5 | .4 | 1.7 | .0  | 1.2  | 100.0 | 2912         |



## OCTOBER

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1855-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .0         | .7         | .4         | 5.2        | 8.6          | 4.1          | 1.5          | .7           | .0           | 1.1   | 22.3  | 77.7               | 269          |
| 06009          | .0         | .0         | 1.2        | 3.6        | 6.3          | 4.8          | 3.2          | .8           | .0           | 1.6   | 21.4  | 78.6               | 252          |
| 12015          | .0         | .0         | .4         | 3.5        | 7.4          | 5.1          | 3.9          | 1.2          | .4           | .8    | 22.6  | 77.4               | 257          |
| 18021          | .0         | 1.2        | 1.2        | 2.8        | 7.2          | 3.2          | 2.4          | 2.0          | .0           | .4    | 20.4  | 79.6               | 250          |
| TOT            | 0          | 5          | 8          | 39         | 76           | 44           | 28           | 12           | 1            | 10    | 223   | 805                | 1028         |
| PCT            | .0         | .5         | .8         | 3.8        | 7.4          | 4.3          | 2.7          | 1.2          | .1           | 1.0   | 21.7  | 78.3               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 2.4   | .2  | 1.4 | 23.9 | 72.2 | 626          |
| 06009          | .0   | 4.0   | .3  | .6  | 27.3 | 67.7 | 865          |
| 12015          | .0   | 3.3   | 1.0 | 2.1 | 20.2 | 73.4 | 605          |
| 18021          | .0   | 4.1   | .2  | 2.4 | 24.1 | 69.2 | 851          |
| TOT            | 0    | 105   | 12  | 47  | 712  | 2071 | 2947         |
| PCT            | .0   | 3.6   | .4  | 1.6 | 24.2 | 70.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .0           | 1.2        | 6.5         | 16.2            | 77.3              | 260          |
| 06009          | .0           | 1.2        | 5.4         | 17.4            | 77.2              | 241          |
| 12015          | .0           | .8         | 4.4         | 18.5            | 77.1              | 249          |
| 18021          | .0           | 2.5        | 5.8         | 15.6            | 78.6              | 243          |
| TOT            | 0            | 14         | 55          | 168             | 770               | 993          |
| PCT            | .0           | 1.4        | 5.5         | 16.9            | 77.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | .2    | .0    | .0    | .0     | 2            | .2          |
| 85/89  | .0   | .0    | .0    | .2    | 1.3   | 1.6   | .5    | .0     | 38           | 3.5         |
| 80/84  | .0   | .0    | .0    | .0    | 2.9   | 16.2  | 15.5  | 2.7    | 409          | 37.4        |
| 75/79  | .0   | .0    | .0    | .1    | 1.6   | 20.5  | 29.0  | 7.4    | 641          | 58.6        |
| 70/74  | .0   | .0    | .0    | .0    | .1    | .0    | .2    | .1     | 4            | .4          |
| TOTAL  | 0    | 0     | 0     | 3     | 67    | 418   | 494   | 112    | 1094         | 100.0       |
| PCT    | .0   | .0    | .0    | .3    | 6.1   | 38.2  | 45.2  | 10.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|-----|----|----|----|-----|-----|------|
| .0   | .1   | .1  | .0  | .0 | .0 | .0 | .0  | .0  | .0   |
| 1.1  | 1.6  | .3  | .2  | .0 | .2 | .0 | .1  | .0  | .0   |
| 8.4  | 22.3 | 3.6 | 1.1 | .2 | .2 | .1 | 1.1 | .0  | .4   |
| 9.4  | 39.9 | 5.8 | 1.3 | .2 | .3 | .1 | .8  | .0  | .6   |
| .0   | .3   | .1  | .0  | .0 | .0 | .0 | .0  | .0  | .0   |
| 18.9 | 64.2 | 9.9 | 2.6 | .4 | .6 | .2 | 2.0 | .0  | 1.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 86  | 82  | 81  | 78  | 75 | 73 | 70  | 78.2 | 1085         |
| 06009          | 88  | 83  | 82  | 78  | 75 | 74 | 69  | 78.2 | 1765         |
| 12015          | 91  | 86  | 85  | 81  | 77 | 75 | 73  | 80.9 | 999          |
| 18021          | 92  | 87  | 84  | 80  | 76 | 74 | 70  | 79.9 | 1709         |
| TOT            | 92  | 86  | 84  | 79  | 75 | 74 | 69  | 79.2 | 5558         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | 2.3   | 31.5  | 53.7  | 12.4   | 82   | 298          |
| 06009          | .0   | .0    | 1.1   | 26.1  | 58.7  | 14.1   | 83   | 283          |
| 12015          | .0   | 1.1   | 13.3  | 48.1  | 31.8  | 5.7    | 77   | 264          |
| 18021          | .0   | .0    | 8.2   | 47.8  | 35.4  | 8.6    | 79   | 268          |
| TOT            | 0    | 3     | 67    | 423   | 505   | 115    | 81   | 1113         |

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1855-1973

# OCTOBER

AREA 0007 CAPE VERDE ISLANDS  
19.5N 23.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | M<br>FOG | MU<br>FOG |
|--------------------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .1       | 1     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .1       | .1       | 4     | .0       | .3        |
| 7/8                | .0       | .1       | .1       | .9       | .1       | 16    | .0       | 1.1       |
| 6                  | .0       | .1       | .2       | .6       | .0       | 13    | .0       | .9        |
| 5                  | .0       | .1       | .5       | .4       | .0       | 14    | .1       | .9        |
| 4                  | .1       | .3       | 1.3      | .6       | .0       | 31    | .1       | 2.1       |
| 3                  | .0       | .8       | 2.5      | .4       | .0       | 51    | .4       | 3.3       |
| 2                  | .1       | 2.3      | 3.8      | .1       | .0       | 87    | .3       | 5.9       |
| 1                  | .2       | 5.5      | 4.7      | .1       | .0       | 148   | 1.0      | 9.6       |
| 0                  | .3       | 13.9     | 5.2      | .0       | .0       | 270   | 1.7      | 17.6      |
| -1                 | .7       | 20.6     | 2.8      | .0       | .0       | 337   | 1.6      | 22.5      |
| -2                 | 2.1      | 12.9     | .4       | .0       | .0       | 216   | .8       | 14.7      |
| -3                 | 1.8      | 5.3      | .4       | .0       | .0       | 104   | .1       | 7.4       |
| -4                 | .9       | 2.4      | .1       | .0       | .0       | 48    | .1       | 3.3       |
| -5                 | .6       | 2.1      | .0       | .0       | .0       | 37    | .0       | 2.6       |
| -6                 | .5       | .4       | .1       | .0       | .0       | 14    | .0       | 1.0       |
| -7/-8              | .3       | .1       | .0       | .0       | .0       | 5     | .0       | .4        |
| -9/-10             | .1       | .1       | .0       | .0       | .0       | 2     | .0       | .1        |
| TOTAL              | 107      | 935      | 307      | 45       | 4        | 1398  | 87       | 1311      |
| PCT                | 7.7      | 66.9     | 22.0     | 3.2      | .3       | 100.0 | 6.2      | 93.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |
| <1      | .5  | 1.7  | .0    | .0    | .0    | .0  | 2.2  | .3  | 1.7  | .2    | .0    | .0    | .0  | 2.1  |
| 1-2     | .7  | 5.0  | .9    | .0    | .0    | .0  | 6.6  | .8  | 13.1 | 8.9   | .0    | .0    | .0  | 22.7 |
| 3-4     | .2  | 3.2  | 3.9   | .3    | .0    | .0  | 7.5  | .0  | 8.4  | 14.1  | .1    | .0    | .0  | 22.5 |
| 5-6     | .0  | .2   | 2.6   | .2    | .0    | .0  | 3.0  | .0  | 1.4  | 11.9  | .2    | .0    | .0  | 13.6 |
| 7       | .0  | .0   | 1.2   | .0    | .0    | .0  | 1.2  | .0  | .0   | 3.0   | .5    | .0    | .0  | 3.5  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .5    | .0    | .0    | .0  | .5   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.3 | 10.0 | 8.6   | .6    | .0    | .0  | 20.6 | 1.0 | 24.6 | 38.6  | .9    | .0    | .0  | 65.0 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .3  | .2   | .0    | .0    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .2  | 3.0  | .9    | .0    | .0    | .0  | 4.0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 3-4     | .0  | 1.9  | 1.1   | .2    | .0    | .0  | 3.1 | .0  | .2   | .2    | .0    | .0    | .0  | .4  |
| 5-6     | .0  | .4   | 1.0   | .1    | .0    | .0  | 1.5 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 5.4  | 3.1   | .3    | .0    | .0  | 9.3 | .0  | .2   | .2    | .0    | .0    | .0  | .4  |

PERIOD: (OVER-ALL) 1963-1973

OCTOBER

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .2  | .2   | .0    | .0    | .0    | .0  | .4  |
| 1-2     | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .2   | .0    | .0    | .0    | .0  | .2  | .2  | .4   | .0    | .0    | .0    | .0  | .6  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 1-2     | .2  | .0   | .0    | .0    | .0    | .0  | .2  | .2  | .6   | .2    | .0    | .0    | .0  | .0  | 1.0       |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .2   | .8    | .0    | .0    | .0  | .0  | .9        |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0        |
| TOT PCT | .2  | .0   | .1    | .0    | .0    | .0  | .3  | .2  | .8   | 1.0   | .0    | .0    | .0  | 2.0 | 98.4      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.3 | 4.4  | .2    | .0    | .0    | .0  | 7.9   |         |
| 1-2     | 2.5 | 21.6 | 10.7  | .0    | .0    | .0  | 34.8  |         |
| 3-4     | .2  | 13.5 | 19.9  | .5    | .0    | .0  | 34.1  |         |
| 5-6     | .0  | 1.9  | 15.3  | .5    | .0    | .0  | 17.8  |         |
| 7       | .0  | .0   | 4.2   | .5    | .0    | .0  | 4.7   |         |
| 8-9     | .0  | .0   | .5    | .0    | .0    | .0  | .5    |         |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 6.0 | 41.5 | 50.8  | 1.8   | .0    | .0  | 100.0 | 569     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.3 | 11.7 | 15.7 | 7.1  | 2.6  | .9  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 328      |
| 6-7          | .0  | .9   | 9.1  | 12.6 | 3.6  | 1.7 | .6    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 233      |
| 8-9          | .0  | .6   | 1.2  | 4.3  | 2.3  | .9  | .4    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 80       |
| 10-11        | .0  | 1.1  | .4   | 2.2  | .9   | .6  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 47       |
| 12-13        | .0  | .0   | .7   | .6   | .4   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 16       |
| >13          | .0  | .0   | .0   | .1   | .1   | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 3        |
| INDET        | 2.5 | 2.5  | 4.2  | 3.2  | .6   | .1  | .1    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 108      |
| TOTAL        | 39  | 136  | 255  | 246  | 85   | 36  | 15    | 1  | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 815      |
| PCT          | 4.8 | 16.7 | 31.3 | 30.2 | 10.4 | 4.4 | 1.8   | .1 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1854-1973

# NOVEMBER

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | 1.1            | .0        | 1.8      | .0                  | 1.2        | .0              | 95.9       |
| NE       | .3                 | .2        | .2   | .0        | .0   | .0              | .0   | .0                      | .5             | .1        | 2.9      | .0                  | 1.5        | .1              | 94.5       |
| E        | 1.2                | 1.7       | .0   | .0        | .0   | .0              | .0   | 3.5                     | .7             | .8        | 8.7      | .0                  | 2.0        | .3              | 84.1       |
| SE       | 2.1                | .0        | 2.1  | .0        | .0   | .0              | .0   | 4.2                     | 1.0            | .0        | 4.2      | .0                  | .0         | .0              | 90.6       |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0              | 100.0      |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 12.5     | .0                  | .0         | .0              | 87.5       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0              | 100.0      |
| NW       | 6.5                | .0        | .0   | .0        | .0   | .0              | .0   | 6.5                     | .0             | .0        | .0       | .0                  | .0         | 6.5             | 87.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0              | 100.0      |
| TOT PCT  | .5                 | .4        | .3   | .0        | .0   | .0              | .0   | 1.1                     | .6             | .2        | 3.7      | .0                  | 1.5        | .2              | 92.8       |
| TOT OBS: | 1491               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 0000       | .3                 | .0        | .0   | .0        | .0   | .0              | .0   | .9                      | .0             | .3        | 3.3      | .0                  | 1.2        | .3              | 94.3       |
| 0600       | 1.5                | .2        | .7   | .0        | .0   | .0              | .0   | 2.2                     | .7             | .2        | 3.9      | .0                  | 1.5        | .0              | 91.4       |
| 1200       | .0                 | .3        | .0   | .0        | .0   | .0              | .0   | .3                      | .3             | .0        | 2.4      | .0                  | 2.2        | .0              | 94.9       |
| 1800       | .0                 | .7        | .2   | .0        | .0   | .0              | .0   | 1.0                     | 1.5            | .2        | 4.6      | .0                  | 1.0        | .5              | 91.3       |
| TOT PCT    | .5                 | .5        | .3   | .0        | .0   | .0              | .0   | 1.1                     | .7             | .2        | 3.6      | .0                  | 1.4        | .2              | 92.9       |
| TOT OBS:   | 1526               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |      | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03   |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |       |
| N        | .5                 | 5.6  | 4.7   | .4    | *     | .0 |      | 11.2  | 10.9         |             | 13.7        | 6.9        | 10.9  | 10.8  | 18.6  | 8.8   | 11.7  | 9.4   |
| NE       | 1.6                | 25.2 | 33.6  | 3.2   | .1    | .0 |      | 63.6  | 12.3         |             | 67.0        | 57.2       | 61.2  | 63.7  | 68.4  | 63.4  | 66.2  | 62.7  |
| E        | .8                 | 8.0  | 8.8   | 1.4   | .1    | .0 |      | 19.1  | 12.2         |             | 14.4        | 26.3       | 20.4  | 19.2  | 9.6   | 22.5  | 17.1  | 22.0  |
| SE       | .3                 | 1.2  | .7    | .1    | .0    | .0 |      | 2.4   | 10.0         |             | 2.3         | 4.3        | 2.4   | 2.2   | 1.0   | 2.8   | 1.9   | 2.6   |
| S        | .3                 | .3   | .1    | *     | .0    | .0 |      | .7    | 6.0          |             | .5          | 1.3        | .9    | 1.8   | .1    | .8    | .2    | .2    |
| SW       | .2                 | .3   | *     | *     | .0    | .0 |      | .5    | 5.1          |             | .5          | .6         | .9    | .5    | .0    | .5    | .3    | .5    |
| W        | .2                 | .1   | .0    | .0    | .0    | .0 |      | .3    | 4.1          |             | .0          | .4         | .2    | .3    | .4    | .3    | .2    | .6    |
| NW       | .2                 | .6   | *     | *     | .0    | .0 |      | .8    | 6.4          |             | .9          | .6         | 1.7   | .4    | .6    | .2    | 1.0   | .5    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |      | .0    | .0           |             | .0          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.4                |      |       |       |       |    |      | 1.4   | .0           |             | .8          | 2.4        | 1.6   | 1.0   | 1.4   | .8    | 1.4   | 1.5   |
| TOT OBS  | 300                | 2266 | 2629  | 283   | 10    | 0  | 5488 |       | 11.7         |             | 486         | 541        | 1023  | 673   | 511   | 527   | 974   | 753   |
| TOT PCT  | 5.5                | 41.3 | 47.9  | 5.2   | .2    | .0 |      | 100.0 |              |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |          |
|----------|--------------------|------|-------|-------|-----|--------------|-------------|-------------|------------|----------|----------|----------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |              |             |             | 00<br>03   | 06<br>09 | 12<br>15 | 18<br>21 |
| N        | 2.4                | 7.0  | 1.8   | *     | .0  |              | 11.2        | 10.9        | 10.1       | 10.8     | 13.6     | 10.7     |
| NE       | 8.2                | 40.4 | 14.5  | .6    | *   |              | 63.6        | 12.3        | 61.8       | 62.2     | 65.9     | 64.7     |
| E        | 3.4                | 10.7 | 4.6   | .4    | *   |              | 19.1        | 12.2        | 20.7       | 20.0     | 16.1     | 19.2     |
| SE       | .9                 | 1.0  | .4    | *     | .0  |              | 2.4         | 10.0        | 3.4        | 2.3      | 1.9      | 2.2      |
| S        | .5                 | .2   | *     | .0    | .0  |              | .7          | 6.0         | .9         | 1.2      | .4       | .2       |
| SW       | .4                 | .1   | *     | .0    | .0  |              | .5          | 5.1         | .6         | .7       | .2       | .4       |
| W        | .2                 | .1   | .0    | .0    | .0  |              | .3          | 4.1         | .2         | .2       | .3       | .3       |
| NW       | .5                 | .3   | *     | .0    | .0  |              | .8          | 6.4         | .7         | 1.2      | .4       | .8       |
| VAR      | .0                 | .0   | .0    | .0    | .0  |              | .0          | .0          | .0         | .0       | .0       | .0       |
| CALM     | 1.4                |      |       |       |     |              | 1.4         | .0          | 1.7        | 1.4      | 1.1      | 1.4      |
| TOT OBS  | 978                | 3280 | 1175  | 54    | 1   | 5488         |             | 11.7        | 1027       | 1696     | 1038     | 1727     |
| TOT PCT  | 17.8               | 59.8 | 21.4  | 1.0   | *   |              | 100.0       |             | 100.0      | 100.0    | 100.0    | 100.0    |

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1854-1973

# NOVEMBER

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | WIND SPEED (KNOTS) |      |       |       |       |     | PCT FREQ | TOTAL OBS |
|------|------|--------------------|------|-------|-------|-------|-----|----------|-----------|
|      |      | 1-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |          |           |
| 0000 | 1.7  | 4.3                | 44.0 | 45.2  | 4.9   | .0    | .0  | 11.4     | 1027      |
| 0600 | 1.4  | 4.2                | 43.9 | 45.8  | 4.5   | .2    | .0  | 11.5     | 1696      |
| 1200 | 1.1  | 3.8                | 39.0 | 50.1  | 5.8   | .3    | .0  | 12.2     | 1038      |
| 1800 | 1.4  | 4.0                | 38.5 | 50.3  | 5.6   | .2    | .0  | 12.0     | 1727      |
| TOT  | 76   | 224                | 2266 | 2629  | 283   | 10    | 0   | 11.7     | 5488      |
| PCT  | 1.4  | 4.1                | 41.3 | 47.9  | 5.2   | .2    | .0  | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 6.7  | 5.1  | 3.7  | 2.1          |              | 3.6                    |
| NE       | 25.3 | 17.1 | 18.7 | 4.5          |              | 3.5                    |
| E        | 3.4  | 3.2  | 3.9  | 2.1          |              | 4.4                    |
| SE       | .2   | .2   | .4   | .6           |              | 5.8                    |
| S        | .1   | .0   | .1   | .0           |              | 4.0                    |
| SW       | .1   | .1   | .1   | .0           |              | 4.6                    |
| W        | .0   | .0   | .0   | .0           |              | .0                     |
| NW       | .5   | .2   | .4   | .3           |              | 4.0                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .3   | .2   | .3   | .1           |              | 3.7                    |
| TOT OBS  | 345  | 246  | 262  | 90           | 943          | 3.7                    |
| TOT PCT  | 36.6 | 26.1 | 27.8 | 9.5          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT/NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| N       | .0  | .0  | .1  | .3  | 1.7  | .6   | .3   | .4   | .0   | .2    | 14.1               |              |
| NE      | .0  | .0  | .1  | 1.6 | 4.9  | 2.0  | 1.8  | .3   | .3   | .6    | 54.1               |              |
| E       | .0  | .0  | .2  | .5  | 1.4  | .8   | .2   | .0   | .2   | .1    | 9.1                |              |
| SE      | .0  | .0  | .0  | .2  | .0   | .0   | .0   | .0   | .0   | .0    | 1.1                |              |
| S       | .0  | .0  | .0  | .0  | .0   | .1   | .0   | .0   | .0   | .0    | .1                 |              |
| SW      | .0  | .0  | .0  | .1  | .0   | .0   | .0   | .0   | .0   | .0    | .1                 |              |
| W       | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| NW      | .0  | .1  | .0  | .0  | .3   | .2   | .0   | .0   | .0   | .0    | .8                 |              |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| CALM    | .0  | .0  | .0  | .0  | .1   | .0   | .0   | .0   | .0   | .0    | .8                 |              |
| TOT OBS | 0   | 1   | 4   | 26  | 79   | 34   | 22   | 6    | 5    | 8     | 758                | 943          |
| TOT PCT | .0  | .1  | .4  | 2.8 | 8.4  | 3.6  | 2.3  | .6   | .5   | .8    | 80.4               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.0       | 1.5  | 1.6  | 1.6  | 1.6  | 1.6  | 1.6   | 1.6  |
| >5000             | 1.6       | 2.1  | 2.2  | 2.2  | 2.2  | 2.2  | 2.2   | 2.2  |
| >3500             | 3.2       | 4.4  | 4.5  | 4.5  | 4.5  | 4.5  | 4.5   | 4.5  |
| >2000             | 5.8       | 7.9  | 8.1  | 8.1  | 8.1  | 8.1  | 8.1   | 8.1  |
| >1000             | 12.0      | 16.0 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5  | 16.5 |
| >600              | 14.2      | 18.6 | 19.2 | 19.2 | 19.2 | 19.2 | 19.2  | 19.2 |
| >300              | 14.4      | 19.2 | 19.6 | 19.6 | 19.6 | 19.6 | 19.6  | 19.6 |
| >150              | 14.4      | 19.3 | 19.7 | 19.7 | 19.7 | 19.7 | 19.7  | 19.7 |
| >0                | 14.4      | 19.3 | 19.7 | 19.7 | 19.7 | 19.7 | 19.7  | 19.7 |
| TOTAL             | 138       | 185  | 189  | 189  | 189  | 189  | 189   | 189  |

TOTAL NUMBER OF OBS: 960

PCT FREQ NH <5/8: 80.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|-----|-----|-----|-----|-----|-------|--------------|
|  | 18.1 | 16.6 | 17.5 | 16.9 | 9.4 | 5.6 | 4.5 | 5.2 | 4.3 | .0    | 1044         |

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1854-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | 1.5  | 1.5  | .1  | .0 | .1 | .0 | .0  | .0  | .0   | 3.4   |              |
|              | TOT %  | .2   | 1.5  | 1.5  | .1  | .0 | .1 | .0 | .0  | .0  | .0   | 3.4   |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .3   | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
|              | TOT %  | .0   | .3   | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
| 2<5          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .2   | 1.1  | .1   | .0  | .0 | .0 | .0 | .1  | .0  | .0   | 1.3   |              |
|              | TOT %  | .2   | 1.1  | .1   | .0  | .0 | .0 | .0 | .1  | .0  | .0   | 1.3   |              |
| 5<10         | PCP    | .0   | .3   | .3   | .5  | .0 | .0 | .0 | .1  | .0  | .0   | .7    |              |
|              | NO PCP | 4.6  | 16.4 | 6.3  | .5  | .2 | .2 | .0 | .3  | .0  | .1   | 28.6  |              |
|              | TOT %  | 4.6  | 16.7 | 6.6  | .5  | .2 | .2 | .0 | .4  | .0  | .1   | 29.2  |              |
| 10+          | PCP    | .0   | .1   | .3   | .1  | .0 | .0 | .0 | .0  | .0  | .0   | .4    |              |
|              | NO PCP | 10.4 | 43.9 | 8.2  | 1.0 | .2 | .2 | .1 | .6  | .0  | .5   | 65.2  |              |
|              | TOT %  | 10.4 | 44.0 | 8.6  | 1.0 | .2 | .2 | .1 | .6  | .0  | .5   | 65.6  |              |
| TOT OBS      |        |      |      |      |     |    |    |    |     |     |      |       | 1491         |
| TOT PCT      |        | 15.3 | 63.5 | 17.0 | 1.6 | .4 | .5 | .1 | 1.0 | .0  | .6   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S  | SW | W  | NW | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|----|----|----|----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
| 1/2<1        | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .2    |              |
|              | 11-21      | .1   | .7   | .7   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 1.5   |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .8   | .8   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 1.8   |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .2    |              |
|              | 11-21      | .0   | .2   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | TOT %      | .0   | .2   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .5    |              |
| 2<5          | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .7   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 1.1   |              |
|              | 11-21      | .1   | .7   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 1.0   |              |
|              | 22+        | .0   | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .3    |              |
|              | TOT %      | .2   | 1.5  | .5   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 2.4   |              |
| 5<10         | 0-3        | .2   | .4   | .1   | .0  | .1 | .1 | .0 | .0 | .0  | .2   | 1.0   |              |
|              | 4-10       | 1.3  | 4.7  | 1.8  | .3  | .1 | .1 | .0 | .2 | .0  | .2   | 8.6   |              |
|              | 11-21      | 1.6  | 8.5  | 2.3  | .1  | .0 | .0 | .0 | .0 | .0  | .0   | 12.5  |              |
|              | 22+        | .2   | .9   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 1.3   |              |
|              | TOT %      | 3.3  | 14.5 | 4.4  | .5  | .2 | .2 | .0 | .2 | .0  | .2   | 23.4  |              |
| 10+          | 0-3        | .3   | 1.2  | .6   | .3  | .1 | .1 | .1 | .2 | .0  | 1.0  | 3.9   |              |
|              | 4-10       | 4.9  | 20.9 | 5.5  | .9  | .3 | .2 | .1 | .3 | .0  | .0   | 33.1  |              |
|              | 11-21      | 3.7  | 24.9 | 3.6  | .3  | .0 | .0 | .0 | .0 | .0  | .0   | 32.7  |              |
|              | 22+        | .2   | 1.8  | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 2.3   |              |
|              | TOT %      | 9.1  | 48.9 | 10.0 | 1.4 | .4 | .2 | .5 | .5 | .0  | 1.0  | 72.0  |              |
| TOT OBS      |            |      |      |      |     |    |    |    |    |     |      |       | 2838         |
| TOT PCT      |            | 12.7 | 65.9 | 15.9 | 2.0 | .6 | .5 | .2 | .9 | .0  | 1.2  | 100.0 |              |



PERIOD: (PRIMARY) 1906-1973  
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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003          | .0         | .0         | .0         | 3.8        | 7.6          | 2.5          | .4           | .8           | .8           | .8    | 16.8  | 83.2                | 238          |
| 06009          | .0         | .4         | .4         | 1.7        | 10.3         | 4.3          | 4.3          | .9           | .0           | .4    | 22.0  | 77.4                | 234          |
| 12015          | .0         | .0         | .3         | 2.7        | 7.5          | 3.1          | 2.0          | .3           | .7           | .7    | 17.3  | 82.7                | 295          |
| 18021          | .0         | .0         | .8         | 1.9        | 6.1          | 3.8          | 1.9          | .4           | .8           | 1.5   | 17.2  | 82.8                | 262          |
| TOT            | 0          | 1          | 4          | 26         | 80           | 35           | 22           | 6            | 6            | 9     | 189   | 840                 | 1029         |
| PCT            | .0         | .1         | .4         | 2.5        | 7.8          | 3.4          | 2.1          | .6           | .6           | .9    | 18.4  | 81.6                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .0   | 1.7   | .2  | 2.1 | 22.0 | 74.0 | 577          |
| 06009          | .0   | 1.8   | .5  | 1.6 | 26.6 | 69.5 | 813          |
| 12015          | .0   | 1.5   | .5  | 3.1 | 19.5 | 75.4 | 615          |
| 18021          | .0   | 1.8   | .6  | 2.9 | 24.7 | 70.0 | 868          |
| TOT            | 0    | 50    | 13  | 69  | 677  | 2064 | 2573         |
| PCT            | .0   | 1.7   | .5  | 2.4 | 23.6 | 71.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .0            | .0         | 5.0         | 14.2            | 80.8               | 219          |
| 06009          | .0            | .9         | 3.7         | 21.6            | 74.8               | 218          |
| 12015          | .0            | .4         | 5.8         | 14.5            | 79.7               | 276          |
| 18021          | .0            | .8         | 6.1         | 14.6            | 79.4               | 247          |
| TOT            | 0             | 5          | 50          | 154             | 756                | 960          |
| PCT            | .0            | .5         | 5.2         | 16.0            | 78.8               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | .2    | .4    | .2    | .0    | .0     | 8            | .8          |
| 80/84  | .0   | .0    | .0    | .2    | 4.1   | 8.3   | 4.4   | 1.5    | 194          | 18.6        |
| 75/79  | .0   | .0    | .0    | .3    | 5.3   | 30.9  | 25.0  | 9.5    | 741          | 70.9        |
| 70/74  | .0   | .0    | .0    | .0    | 1.4   | 4.8   | 2.1   | 1.4    | 102          | 9.8         |
| TOTAL  | 0    | 0     | 0     | 7     | 117   | 462   | 329   | 130    | 1045         | 100.0       |
| PCT    | .0   | .0    | .0    | .7    | 11.2  | 44.2  | 31.5  | 12.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM |
|-------|------|------|------|-----|----|----|----|-----|-----|------|
| 85/89 | .2   | .5   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0   |
| 80/84 | 3.3  | 12.3 | 1.9  | .4  | .0 | .0 | .1 | .3  | .0  | .2   |
| 75/79 | 10.8 | 47.9 | 9.5  | .8  | .1 | .3 | .0 | 1.1 | .0  | .5   |
| 70/74 | 2.0  | 5.7  | 1.7  | .1  | .1 | *  | .0 | .0  | .0  | .0   |
| TOTAL | 16.3 | 66.5 | 13.2 | 1.3 | .3 | .3 | .1 | 1.4 | .0  | .7   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 85  | 81  | 80  | 76  | 73 | 71 | 68  | 76.3 | 1035         |
| 06009          | 84  | 81  | 80  | 76  | 73 | 71 | 66  | 76.2 | 1686         |
| 12015          | 90  | 85  | 84  | 79  | 75 | 73 | 67  | 78.9 | 986          |
| 18021          | 90  | 85  | 82  | 77  | 74 | 72 | 67  | 77.7 | 1675         |
| TOT            | 90  | 84  | 82  | 77  | 73 | 72 | 66  | 77.2 | 5382         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | 6.3   | 41.7  | 36.2  | 15.7   | 80   | 254          |
| 06009          | .0   | .4    | 5.7   | 38.5  | 39.7  | 15.6   | 81   | 262          |
| 12015          | .0   | 1.4   | 16.8  | 47.7  | 26.0  | 8.1    | 77   | 285          |
| 18021          | .0   | .7    | 15.0  | 47.9  | 26.2  | 10.1   | 78   | 267          |
| TOT            | 0    | 7     | 119   | 471   | 340   | 131    | 79   | 1068         |

PERIOD: (PRIMARY) 1906-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | N<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | .0       | 1     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .2       | .0       | 4     | .0       | .3        |
| 7/8                | .0       | .0       | .0       | .1       | .0       | .1       | .1       | 3     | .0       | .2        |
| 6                  | .0       | .0       | .0       | .1       | .3       | .1       | .0       | 8     | .1       | .5        |
| 5                  | .0       | .0       | .1       | .1       | .4       | .1       | .0       | 11    | .0       | .8        |
| 4                  | .0       | .0       | .1       | .3       | 1.2      | .1       | .0       | 23    | .0       | 1.6       |
| 3                  | .0       | .1       | .2       | 1.0      | .9       | .1       | .0       | 32    | .1       | 2.1       |
| 2                  | .0       | .0       | .6       | 2.4      | 1.9      | .0       | .0       | 58    | .1       | 4.7       |
| 1                  | .0       | .0       | .9       | 5.9      | 1.8      | .0       | .0       | 121   | .6       | 8.0       |
| 0                  | .0       | .1       | 3.2      | 12.5     | 1.6      | .0       | .0       | 243   | 1.1      | 16.2      |
| -1                 | .0       | .1       | 7.2      | 13.0     | .5       | .0       | .0       | 291   | 1.0      | 19.8      |
| -2                 | .0       | .1       | 10.4     | 9.8      | .1       | .0       | .0       | 286   | .6       | 19.8      |
| -3                 | .0       | .1       | 7.2      | 4.4      | .1       | .0       | .0       | 166   | .0       | 11.9      |
| -4                 | .0       | .3       | 2.3      | 1.9      | .1       | .0       | .0       | 63    | .0       | 4.5       |
| -5                 | .0       | .0       | 2.0      | 1.2      | .0       | .0       | .0       | 45    | .1       | 3.1       |
| -6                 | .0       | .2       | .5       | .4       | .0       | .0       | .0       | 16    | .0       | 1.1       |
| -7/-8              | .0       | .2       | .4       | .2       | .0       | .0       | .0       | 12    | .0       | .9        |
| -9/-10             | .1       | .1       | .1       | .0       | .0       | .0       | .0       | 4     | .0       | .3        |
| TOTAL              | 2        | 18       | 493      | 747      | 125      | 11       | 1        | 1397  | 3.9      | 1343      |
| PCT                | .1       | 1.3      | 35.3     | 53.5     | 8.9      | .8       | .1       | 100.0 | 3.9      | 96.1      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .0  | .1   | .3    | .0    | .0    | .0  | .4   | .4  | 1.7  | .1    | .0    | .0    | .0  | 2.1  |
| 1-2     | .2  | 3.9  | 2.9   | .0    | .0    | .0  | 7.0  | 1.3 | 12.8 | 6.0   | .0    | .0    | .0  | 20.1 |
| 3-4     | .0  | 1.5  | 3.6   | .3    | .0    | .0  | 5.4  | .2  | 9.1  | 16.9  | 1.0   | .0    | .0  | 27.2 |
| 5-6     | .0  | .4   | 1.9   | .0    | .0    | .0  | 2.3  | .0  | 1.4  | 11.0  | 1.3   | .0    | .0  | 13.8 |
| 7       | .0  | .0   | .6    | .2    | .0    | .0  | .8   | .0  | .0   | 3.0   | .6    | .0    | .0  | 3.7  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .3   | .0  | .0   | 1.2   | 1.0   | .0    | .0  | 2.3  |
| 10-11   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .2    | .0    | .0  | .2   |
| 12      | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .2  | 6.0  | 9.6   | .8    | .0    | .0  | 16.5 | 1.8 | 25.0 | 38.3  | 4.2   | .0    | .0  | 69.4 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .7   | .0    | .0    | .0    | .0  | .9   | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | 4.3  | .9    | .0    | .0    | .0  | 5.3  | .4  | .0   | .0    | .0    | .0    | .0  | .4  |
| 3-4     | .0  | 1.8  | 2.2   | .0    | .0    | .0  | 3.9  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .9    | .1    | .0    | .0  | 1.1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .6    | .1    | .0    | .0  | .7   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .4   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 6.8  | 4.7   | .4    | .1    | .0  | 12.2 | .4  | .0   | .1    | .0    | .0    | .0  | .6  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     |  | SW  |      |       |       |       |     |     |    |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |    |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |    |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |    |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .2    | .0    | .0    | .0  | .0  | .2 |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .2    | .0    | .0    | .0  | .0  | .2 |

| HGT     | W   |      |       |       |       |     |     |  | NW  |      |       |       |       |     |     |    | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|--|-----|------|-------|-------|-------|-----|-----|----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |    |           |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .2   | .0    | .0    | .0    | .0  | .0  | .2 |           |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .4  | .0   | .0    | .0    | .0    | .0  | .0  | .4 |           |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .2   | .0    | .0    | .0    | .0  | .0  | .2 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 |           |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  | .4  | .4   | .0    | .0    | .0    | .0  | .0  | .7 | 99.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 1.6 | 2.7  | .4    | .0    | .0    | .0  | 4.7   |         |
| 1-2     | 3.1 | 20.9 | 9.6   | .0    | .0    | .0  | 33.6  |         |
| 3-4     | .2  | 12.3 | 22.5  | 1.3   | .0    | .0  | 36.3  |         |
| 5-6     | .0  | 1.8  | 13.6  | 1.5   | .0    | .0  | 16.9  |         |
| 7       | .0  | .0   | 4.2   | .9    | .0    | .0  | 5.1   |         |
| 8-9     | .0  | .0   | 1.5   | 1.3   | .2    | .0  | 2.9   |         |
| 10-11   | .0  | .0   | .0    | .4    | .0    | .0  | .4    |         |
| 12      | .0  | .0   | .2    | .0    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.9 | 37.7 | 51.9  | 5.3   | .2    | .0  | 100.0 | 551     |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 10.9 | 17.2 | 10.6 | 2.6  | .5  | .3    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 340   | 3        |
| 6-7          | .0  | .6   | 6.2  | 7.5  | 4.9  | 1.6 | .4    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 165   | 5        |
| 8-9          | .0  | .1   | 2.2  | 3.1  | 1.6  | 1.4 | .8    | .5  | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 80    | 6        |
| 10-11        | .0  | .0   | 1.0  | 1.6  | 1.0  | .9  | .8    | .4  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 44    | 7        |
| 12-13        | .0  | .0   | .4   | .6   | .1   | .4  | .0    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 13    | 6        |
| >13          | .0  | .0   | .0   | .0   | .1   | .3  | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 3     | 8        |
| INDET        | .4  | 3.8  | 5.6  | 3.0  | 2.7  | .1  | .9    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 127   | 4        |
| TOTAL        | 16  | 119  | 232  | 204  | 101  | 40  | 24    | 9   | 5     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 772   | 4        |
| PCT          | 2.3 | 15.4 | 32.6 | 26.4 | 13.1 | 5.2 | 3.1   | 1.2 | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1854-1973

DECEMBER

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WJ PCPN | FOG WJ PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .0   |           | .0   | .0        | .0   | .0              | .0   | .7              | .5             | .0                      | 6.1         | .0                  | .9         | .0                   | 91.7       |
| NE                 | .7   | .3        | .3   | .0        | .0   | .0              | .0   | 1.4             | *              | .4                      | 3.1         | .0                  | 2.1        | .3                   | 92.6       |
| E                  | 1.3  | .6        | 1.1  | .0        | .0   | .0              | .0   | 3.0             | .3             | .0                      | 6.0         | .0                  | 2.0        | .0                   | 88.7       |
| SE                 | 4.7  | .0        | .0   | .0        | .0   | .0              | .0   | 4.7             | 1.2            | .0                      | 2.4         | .0                  | .0         | .0                   | 91.8       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 28.6        | .0                  | .0         | .0                   | 71.4       |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | 100.0      |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 7.4         | .0                  | .0         | .0                   | 92.6       |
| NW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 38.6        | .0                  | .0         | .0                   | 61.4       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .0   | 14.3      | .0   | .0        | .0   | .0              | .0   | 14.3            | .0             | .0                      | .0          | .0                  | .0         | .0                   | 85.7       |
| TOT PCT            | .8   | .5        | .4   | .0        | .0   | .0              | .0   | 1.7             | .1             | .3                      | 4.3         | .0                  | 1.9        | .2                   | 91.4       |
| TOT OBS:           | 1461 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                       |              |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|-----------------------|--------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .3                 | .0           | .3   | .0           | .0   | .0                    | .0   | .6                 | .0                      | .3           | 4.5               | .0                        | 1.2           | .3                    |              | 93.1             |
| 06009         | 1.6                | 1.1          | .8   | .0           | .0   | .0                    | .0   | 3.4                | .0                      | .8           | 5.3               | .0                        | .5            | .0                    |              | 89.9             |
| 12015         | .6                 | .3           | .8   | .0           | .0   | .0                    | .0   | 1.7                | .0                      | .0           | 2.2               | .0                        | 4.4           | .6                    |              | 91.2             |
| 18021         | .7                 | .5           | .0   | .0           | .0   | .0                    | .0   | 1.2                | .5                      | .0           | 5.1               | .0                        | 1.5           | .0                    |              | 91.7             |
| TOT PCT       | .8                 | .5           | .5   | .0           | .0   | .0                    | .0   | 1.7                | .1                      | .3           | 4.3               | .0                        | 1.9           | .2                    |              | 91.5             |
| TOT OBS:      | 1486               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                       |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |      | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00   |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |       |
| N        | .5                 | 3.3  | 4.5   | .4    | .0    | .0  |      | 8.8          | 11.5        |             | 10.1       | 6.8   | 8.6   | 9.0   | 10.5  | 7.2   | 9.3   | 8.5   |
| NE       | 1.5                | 19.1 | 38.0  | 7.0   | .1    | .0  |      | 65.7         | 13.9        |             | 72.6       | 58.6  | 63.2  | 65.7  | 73.7  | 60.2  | 67.6  | 65.1  |
| E        | .6                 | 6.2  | 11.2  | 2.8   | .1    | .0  |      | 20.8         | 14.0        |             | 14.4       | 28.1  | 22.5  | 21.2  | 12.5  | 26.7  | 18.7  | 21.9  |
| SE       | .2                 | 1.1  | .6    | .1    | .0    | .0  |      | 2.1          | 9.6         |             | .7         | 3.4   | 2.5   | 1.7   | 1.1   | 3.0   | 1.5   | 2.6   |
| S        | .1                 | .2   | *     | *     | .0    | .0  |      | .4           | 5.7         |             | .0         | .6    | .5    | .5    | .0    | .3    | .4    | .5    |
| SW       | .1                 | .1   | *     | *     | .0    | .0  |      | .3           | 6.8         |             | .0         | .4    | .5    | .3    | *     | .6    | .3    | .3    |
| W        | .2                 | .1   | *     | .0    | .0    | .0  |      | .4           | 5.5         |             | .4         | .1    | .2    | .2    | .2    | .5    | .9    | .2    |
| NW       | .2                 | .3   | .1    | .0    | .0    | .0  |      | .6           | 6.8         |             | .6         | .6    | .7    | .6    | 1.5   | .3    | .5    | .2    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |      | .0           | .0          |             | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |       |     |      | 1.0          | .0          |             | 1.2        | 1.5   | 1.3   | .8    | .4    | 1.2   | .9    | .7    |
| TOT OBS  | 239                | 1603 | 2867  | 546   | 10    | 0   | 5259 |              | 13.3        |             | 489        | 532   | 952   | 629   | 509   | 509   | 937   | 702   |
| TOT PCT  | 4.4                | 30.5 | 54.5  | 10.4  | .2    | .0  |      | 100.0        |             |             | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |          |
|----------|--------------------|------|-------|-------|-----|--------------|-------------|-------------|------------|----------|----------|----------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |              |             |             | 00<br>03   | 06<br>09 | 12<br>15 | 18<br>21 |
| N        | 1.8                | 5.4  | 1.6   | *     | .0  | 8.8          | 11.5        | 8.4         | 8.8        | 8.8      | 9.0      |          |
| NE       | 5.9                | 37.1 | 21.3  | 1.3   | .0  | 65.7         | 13.9        | 65.3        | 64.2       | 67.0     | 66.5     |          |
| E        | 2.7                | 10.4 | 7.1   | .7    | .0  | 20.8         | 14.0        | 21.5        | 22.0       | 19.6     | 20.1     |          |
| SE       | .9                 | .8   | .3    | *     | .0  | 2.1          | 9.6         | 2.1         | 2.2        | 2.1      | 2.0      |          |
| S        | .3                 | .1   | *     | .0    | .0  | .4           | 5.7         | .3          | .5         | .1       | .4       |          |
| SW       | .2                 | .1   | *     | .0    | .0  | .3           | 6.8         | .2          | .4         | .3       | .3       |          |
| W        | .2                 | .1   | .0    | .0    | .0  | .4           | 5.5         | .2          | .2         | .4       | .6       |          |
| NW       | .3                 | .3   | *     | .0    | .0  | .6           | 6.8         | .6          | .6         | .9       | .4       |          |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0           | .0          | .0          | .0         | .0       | .0       |          |
| CALM     | 1.0                |      |       |       |     | 1.0          | .0          | 1.4         | 1.1        | .8       | .8       |          |
| TOT OBS  | 699                | 2853 | 1601  | 106   | 0   | 5259         | 13.3        | 1021        | 1581       | 1018     | 1639     |          |
| TOT PCT  | 13.3               | 54.2 | 30.4  | 2.0   | .0  |              | 100.0       | 100.0       | 100.0      | 100.0    | 100.0    |          |

## DECEMBER

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1894-1973AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 1.4  | 4.0 | 32.3 | 54.0               | 8.1   | .2    | .0  | 12.8  | 100.0    | 1021      |
| 06009 | 1.1  | 3.5 | 31.8 | 52.6               | 10.9  | .1    | .0  | 13.2  | 100.0    | 1581      |
| 12015 | .8   | 2.8 | 29.7 | 53.9               | 12.7  | .2    | .0  | 13.9  | 100.0    | 1018      |
| 18211 | .8   | 3.5 | 28.6 | 57.0               | 9.8   | .2    | .0  | 13.4  | 100.0    | 1639      |
| TOT   | 52   | 181 | 1603 | 2867               | 546   | 10    | 0   | 13.3  |          | 5259      |
| PCT   | 1.0  | 3.4 | 30.5 | 54.5               | 10.4  | .2    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 3.5  | 1.7  | 3.6  | .7           |              | 3.8                    |
| NE       | 25.3 | 16.5 | 22.2 | 8.3          |              | 3.9                    |
| E        | 6.1  | 2.5  | 4.8  | 1.3          |              | 3.5                    |
| SE       | .7   | .2   | .2   | .2           |              | 3.8                    |
| S        | .0   | .0   | .0   | .0           |              | .0                     |
| SW       | .1   | .0   | .1   | .0           |              | 3.0                    |
| W        | .2   | .0   | .2   | .1           |              | 4.1                    |
| NW       | .5   | .1   | .2   | .0           |              | 2.4                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .2   | .1   | .2   | .1           |              | 4.3                    |
| TOT OBS  | 369  | 213  | 317  | 108          | 1007         | 3.8                    |
| TOT PCT  | 36.6 | 21.2 | 31.5 | 10.7         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| N       | .0  | .0  | .0  | .6  | 1.0  | .1   | .4   | .1   | .2   | .1    | 6.9                |              |
| NE      | .0  | .1  | .8  | 2.5 | 5.5  | 4.2  | 1.9  | .7   | .3   | 1.5   | 54.9               |              |
| E       | .0  | .1  | .0  | .3  | 1.5  | 1.0  | .0   | .1   | .0   | .0    | 11.6               |              |
| SE      | .0  | .0  | .0  | .0  | .2   | .0   | .1   | .0   | .0   | .0    | 1.1                |              |
| S       | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| SW      | .0  | .0  | .0  | .0  | .0   | .0   | .1   | .0   | .0   | .0    | .1                 |              |
| W       | .0  | .0  | .0  | .0  | .0   | .2   | .0   | .0   | .0   | .0    | .3                 |              |
| NW      | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .7                 |              |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| CALM    | .0  | .0  | .0  | .0  | .0   | .1   | .0   | .0   | .0   | .0    | .5                 |              |
| TOT OBS | 0   | 2   | 8   | 34  | 83   | 57   | 25   | 9    | 5    | 16    | 768                | 1007         |
| TOT PCT | .0  | .2  | .8  | 3.4 | 8.2  | 5.7  | 2.5  | .9   | .5   | 1.6   | 76.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.3       | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1   | 2.1  |
| >5000             | 2.1       | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0   | 3.0  |
| >3500             | 4.0       | 5.2  | 5.3  | 5.3  | 5.3  | 5.3  | 5.3   | 5.3  |
| >2000             | 9.3       | 10.8 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9  | 10.9 |
| >1000             | 15.6      | 18.9 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1  | 19.1 |
| >600              | 18.5      | 22.3 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5  | 22.5 |
| >300              | 19.1      | 23.1 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3  | 23.3 |
| >150              | 19.2      | 23.3 | 23.4 | 23.4 | 23.4 | 23.4 | 23.4  | 23.4 |
| >0                | 19.2      | 23.3 | 23.4 | 23.4 | 23.4 | 23.4 | 23.4  | 23.4 |
| TOTAL             | 195       | 236  | 238  | 238  | 238  | 238  | 238   | 238  |

TOTAL NUMBER OF OBS: 1015

PCT FREQ NH &lt;5/8: 76.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|--|------|------|------|------|------|-----|-----|-----|-----|-------|--------------|
|  | 20.5 | 15.4 | 18.4 | 11.4 | 10.2 | 6.1 | 6.9 | 5.7 | 5.6 | .0    | 1073         |

PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1954-1973

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AREA 0007 CAPE VERDE ISLANDS  
19.9N 23.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %  | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | NO PCP | .6   | 1.8  | 1.3  | .1  | .1 | .0 | *  | .4  | .0  | .0   | 4.2   |              |
|              | TOT %  | .6   | 1.8  | 1.4  | .1  | .1 | .0 | *  | .4  | .0  | .0   | 4.4   |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | .2   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .3    |              |
|              | TOT %  | *    | .2   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .3    |              |
| 2<5          | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .0   | 1.0  | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | 1.2   |              |
|              | TOT %  | .0   | 1.0  | .2   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | 1.2   |              |
| 5<10         | PCP    | .1   | .8   | .3   | .1  | .0 | .0 | .0 | .0  | .0  | .0   | 1.3   |              |
|              | NO PCP | 2.4  | 16.9 | 6.1  | .5  | .2 | .0 | .1 | *   | .0  | .1   | 26.3  |              |
|              | TOT %  | 2.5  | 17.8 | 6.4  | .5  | .2 | .0 | .1 | *   | .0  | .1   | 27.6  |              |
| 10+          | PCP    | .0   | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .1   | .3    |              |
|              | NO PCP | 6.3  | 47.9 | 9.9  | .8  | .0 | .2 | .3 | .6  | .0  | .3   | 66.3  |              |
|              | TOT %  | 6.3  | 48.0 | 10.0 | .8  | .0 | .2 | .3 | .6  | .0  | .4   | 66.6  |              |
| TOT OBS      |        | 1460 |      |      |     |    |    |    |     |     |      |       |              |
| TOT PCT      |        | 9.5  | 68.8 | 18.0 | 1.5 | .2 | .2 | .5 | 1.0 | .0  | .5   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S  | SW | W  | NW | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|----|----|----|----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 11-21      | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 22+        | .0   | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .1    |              |
|              | TOT %      | .0   | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | *     |              |
|              | 4-10       | .3   | .2   | .1   | *   | .0 | *  | .2 | .0 | .0  | .0   | .8    |              |
|              | 11-21      | .1   | .4   | .4   | .1  | .0 | .0 | .0 | *  | .0  | .0   | 1.0   |              |
|              | 22+        | .0   | .3   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .5    |              |
|              | TOT %      | .3   | .9   | .7   | .1  | *  | .0 | *  | .2 | .0  | .0   | 2.3   |              |
| 1<2          | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | *    | .1   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .2    |              |
|              | 11-21      | .0   | .3   | .3   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .6    |              |
|              | 22+        | *    | .1   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .1    |              |
|              | TOT %      | .1   | .5   | .3   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .9    |              |
| 2<5          | 0-3        | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0    |              |
|              | 4-10       | .1   | .3   | .2   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .6    |              |
|              | 11-21      | .2   | 1.4  | .5   | .0  | .0 | .0 | *  | .0 | .0  | .0   | 2.1   |              |
|              | 22+        | .0   | .4   | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .6    |              |
|              | TOT %      | .2   | 2.2  | .8   | .0  | .0 | .0 | *  | .0 | .0  | .0   | 3.2   |              |
| 5<10         | 0-3        | *    | .3   | .1   | .1  | .0 | .0 | .0 | *  | .0  | .1   | .6    |              |
|              | 4-10       | .8   | 4.3  | 1.7  | .3  | .1 | .0 | .1 | *  | .0  | .0   | 7.2   |              |
|              | 11-21      | 1.4  | 9.2  | 2.7  | *   | .0 | .0 | .0 | *  | .0  | .0   | 13.4  |              |
|              | 22+        | .1   | 2.0  | .7   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 2.8   |              |
|              | TOT %      | 2.3  | 15.8 | 5.3  | .4  | .1 | .0 | .1 | .1 | .0  | .1   | 24.0  |              |
| 10+          | 0-3        | .4   | .8   | .4   | .1  | .1 | .1 | .1 | .2 | .0  | .7   | 2.9   |              |
|              | 4-10       | 2.7  | 16.0 | 3.9  | .5  | .1 | .1 | .1 | .2 | .0  | .0   | 23.5  |              |
|              | 11-21      | 3.4  | 28.5 | 5.5  | .1  | .0 | *  | .0 | .1 | .0  | .0   | 37.6  |              |
|              | 22+        | .3   | 4.1  | 1.0  | .0  | .0 | .0 | .0 | .0 | .0  | .0   | 5.4   |              |
|              | TOT %      | 6.8  | 49.4 | 10.8 | .7  | .1 | .3 | .2 | .5 | .0  | .7   | 69.4  |              |
| TOT OBS      |            | 2905 |      |      |     |    |    |    |    |     |      |       |              |
| TOT PCT      |            | 9.7  | 68.9 | 18.0 | 1.1 | .3 | .3 | .3 | .8 | .0  | .7   | 100.0 |              |



PERIOD: (PRIMARY) 1910-1973  
(OVER-ALL) 1854-1973

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15.5N 23.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+     | TOTAL       | NH < 5/8<br>ANY HGT | TOTAL<br>OBS  |
|-------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-----------|-------------|---------------------|---------------|
| 00003       | .0         | .4         | .0         | 4.7        | 6.3          | 2.8          | .8           | .4           | .4           | 2.4       | 18.2        | 81.8                | 253           |
| 06009       | .0         | .0         | .9         | 3.4        | 7.7          | 4.3          | 2.6          | 1.7          | .4           | 1.3       | 22.2        | 77.8                | 234           |
| 12015       | .0         | .3         | .3         | 3.3        | 8.4          | 7.0          | 4.0          | .3           | .3           | 1.3       | 25.4        | 74.6                | 299           |
| 18021       | .0         | .0         | 1.9        | 1.5        | 9.0          | 7.1          | 1.9          | 1.1          | .8           | 1.1       | 24.4        | 75.6                | 266           |
| TOT<br>PCT  | 0<br>.0    | 2<br>.2    | 8<br>.8    | 34<br>3.2  | 83<br>7.9    | 57<br>5.4    | 25<br>2.4    | 9<br>.9      | 5<br>.5      | 16<br>1.5 | 239<br>22.7 | 813<br>77.3         | 1052<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HR<br>(GMT) | <1/2    | 1/2<1     | 1<2      | 2<5       | 5<10        | 10+          | TOTAL<br>OBS  |
|-------------|---------|-----------|----------|-----------|-------------|--------------|---------------|
| 00003       | .0      | 2.6       | .8       | 3.1       | 23.1        | 70.4         | 615           |
| 06009       | .2      | 2.6       | .7       | 2.4       | 25.4        | 68.6         | 831           |
| 12015       | .0      | 1.1       | .8       | 3.5       | 21.3        | 73.2         | 620           |
| 18021       | .0      | 2.8       | 1.3      | 3.8       | 26.4        | 65.7         | 864           |
| TOT<br>PCT  | 2<br>.1 | 69<br>2.4 | 27<br>.9 | 94<br>3.2 | 713<br>24.3 | 2025<br>69.1 | 2930<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8), BY HOUR

| HR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS  |
|-------------|---------------|------------|-------------|-----------------|--------------------|---------------|
| 00003       | .0            | .4         | 6.6         | 13.2            | 80.2               | 242           |
| 06009       | .0            | .9         | 4.4         | 18.5            | 77.1               | 227           |
| 12015       | .0            | .7         | 6.2         | 21.3            | 72.5               | 291           |
| 18021       | .0            | 2.0        | 4.7         | 22.0            | 73.3               | 255           |
| TOT<br>PCT  | 0<br>.0       | 10<br>1.0  | 56<br>5.5   | 192<br>18.9     | 767<br>75.6        | 1015<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F     | 0-29    | 30-39   | 40-49   | 50-59     | 60-69       | 70-79       | 80-89       | 90-100    | TOTAL<br>OBS | PCT<br>FREQ |
|------------|---------|---------|---------|-----------|-------------|-------------|-------------|-----------|--------------|-------------|
| 85/89      | .0      | .0      | .0      | .0        | .1          | .0          | .0          | .0        | 1            | .1          |
| 80/84      | .0      | .0      | .0      | .2        | .8          | 1.7         | .8          | .1        | 39           | 3.7         |
| 75/79      | .0      | .0      | .1      | .6        | 7.3         | 21.6        | 9.9         | 2.5       | 444          | 41.9        |
| 70/74      | .0      | .0      | .0      | 2.5       | 13.1        | 22.3        | 10.1        | 4.3       | 554          | 52.3        |
| 65/69      | .0      | .0      | .0      | .3        | .6          | .7          | .4          | .1        | 21           | 2.0         |
| TOT<br>PCT | 0<br>.0 | 0<br>.0 | 1<br>.1 | 37<br>3.5 | 232<br>21.9 | 490<br>46.3 | 225<br>21.2 | 74<br>7.0 | 1059         | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N   | NE   | E    | SE  | S  | SW | W  | NW | VAR | CALM |
|-------|-----|------|------|-----|----|----|----|----|-----|------|
| 85/89 | .0  | .1   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   |
| 80/84 | .4  | 2.7  | .4   | .0  | .0 | .1 | .0 | .1 | .0  | .0   |
| 75/79 | 4.4 | 31.1 | 5.2  | .7  | .0 | .0 | .1 | .3 | .0  | .1   |
| 70/74 | 4.5 | 37.9 | 8.5  | .7  | .0 | .1 | .3 | .1 | .0  | .2   |
| 65/69 | .1  | 1.2  | .5   | .1  | .0 | .0 | .0 | .0 | .0  | .1   |
| TOT   | 9.5 | 73.0 | 14.5 | 1.5 | .0 | .2 | .4 | .5 | .0  | .4   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|-------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003       | 82  | 78  | 77  | 73  | 70 | 68 | 67  | 73.2 | 1014         |
| 06009       | 82  | 78  | 77  | 73  | 69 | 68 | 66  | 73.1 | 1573         |
| 12015       | 88  | 84  | 81  | 76  | 72 | 69 | 67  | 75.8 | 975          |
| 18021       | 87  | 82  | 80  | 75  | 71 | 69 | 67  | 74.7 | 1601         |
| TOT         | 88  | 82  | 79  | 74  | 70 | 68 | 66  | 74.1 | 5163         |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|-------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003       | .0   | 2.0   | 19.8  | 45.2  | 24.2  | 8.7    | 77   | 252          |
| 06009       | .0   | 2.0   | 19.1  | 39.4  | 28.7  | 10.8   | 77   | 251          |
| 12015       | .0   | 6.2   | 26.7  | 48.6  | 13.7  | 4.8    | 73   | 292          |
| 18021       | .0   | 3.7   | 22.0  | 50.2  | 19.4  | 4.8    | 75   | 273          |
| TOT         | 0    | 38    | 236   | 492   | 226   | 76     | 75   | 1068         |

PERIOD: (PRIMARY) 1910-1973  
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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 45<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 11/13              | .0       | .0       | .0       | .0       | .0       | .1       | 1     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .0       | 2     | .0       | .1        |
| 7/8                | .0       | .0       | .1       | .1       | .1       | .0       | 5     | .1       | .3        |
| 6                  | .0       | .0       | .1       | .1       | .1       | .0       | 3     | .0       | .2        |
| 5                  | .0       | .0       | .1       | .1       | .1       | .0       | 6     | .0       | .4        |
| 4                  | .0       | .0       | .3       | .6       | .4       | .0       | 17    | .1       | 1.1       |
| 3                  | .0       | .3       | .6       | 1.0      | .4       | .0       | 30    | .0       | 2.2       |
| 2                  | .0       | .0       | 1.5      | 1.7      | .7       | .0       | 53    | .2       | 3.7       |
| 1                  | .0       | .4       | 3.5      | 3.1      | .0       | .0       | 96    | .3       | 6.8       |
| 0                  | .0       | .9       | 9.0      | 4.1      | .2       | .0       | 193   | .7       | 13.6      |
| -1                 | .1       | 2.6      | 13.3     | 2.3      | .1       | .0       | 249   | 1.1      | 17.3      |
| -2                 | .1       | 5.5      | 13.1     | 1.9      | .0       | .0       | 278   | 1.3      | 19.3      |
| -3                 | .1       | 6.4      | 8.1      | 1.1      | .0       | .0       | 214   | .7       | 15.1      |
| -4                 | .0       | 3.3      | 4.7      | .3       | .0       | .0       | 113   | .2       | 8.1       |
| -5                 | .1       | 2.1      | 1.5      | .3       | .0       | .0       | 54    | .0       | 4.0       |
| -6                 | .1       | 1.0      | .2       | .0       | .0       | .0       | 18    | .0       | 1.3       |
| -7/-8              | .1       | .7       | .6       | .0       | .0       | .0       | 18    | .0       | 1.3       |
| -9/-10             | .0       | .2       | .1       | .0       | .0       | .0       | 4     | .0       | .3        |
| -11/-13            | .1       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | .1        |
| TOTAL              | 9        | 316      | 772      | 31       | 1        | 1355     | 63    | 1292     |           |
| PCT                | .7       | 29.3     | 57.0     | 16.7     | 2.3      | .1       | 100.0 | 4.6      | 95.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |     | PCT | NE   |      |       |       |       |     |    | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|------|-------|-------|-------|-----|----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |      |
| <1      | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .6  | 2.2  | .0   | .0    | .0    | .0    | .0  | .0 | 2.7  |
| 1-2     | .0  | 1.3  | .7    | .0    | .0    | .0  | 2.0 | .0  | 9.1  | 3.4  | .0    | .0    | .0    | .0  | .0 | 12.8 |
| 3-4     | .0  | 1.1  | 2.8   | .0    | .0    | .0  | 3.9 | .0  | 7.8  | 17.2 | .9    | .0    | .0    | .0  | .0 | 25.9 |
| 5-6     | .0  | .0   | 1.0   | .0    | .0    | .0  | 2.0 | .0  | 1.1  | 18.2 | 1.6   | .0    | .0    | .0  | .0 | 20.9 |
| 7       | .0  | .0   | .6    | .1    | .0    | .0  | .7  | .0  | .0   | 6.0  | 2.2   | .0    | .0    | .0  | .0 | 8.1  |
| 8-9     | .0  | .0   | .2    | .1    | .0    | .0  | .3  | .0  | .0   | .9   | 1.4   | .0    | .0    | .0  | .0 | 2.3  |
| 10-11   | .0  | .0   | .0    | .3    | .0    | .0  | .3  | .0  | .0   | .5   | .3    | .0    | .0    | .0  | .0 | .9   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .2    | .0    | .0    | .0  | .0 | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| TOT PCT | .0  | 2.5  | 6.3   | .6    | .0    | .0  | 9.4 | .7  | 20.2 | 46.3 | 6.6   | .0    | .0    | .0  | .0 | 73.8 |

| HGT     | E   |      |       |       |       |     |      | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | .1  | .6   | .0    | .0    | .0    | .0  | .8   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 1-2     | .0  | 2.3  | 1.3   | .0    | .0    | .0  | 3.6  | .0  | .3  | .0   | .0    | .0    | .0    | .0  | .0 | .3  |
| 3-4     | .0  | .9   | 3.4   | .3    | .0    | .0  | 4.7  | .0  | .1  | .0   | .0    | .0    | .0    | .0  | .0 | .1  |
| 5-6     | .0  | .3   | 2.3   | .3    | .0    | .0  | 2.9  | .0  | .0  | .2   | .0    | .0    | .0    | .0  | .0 | .2  |
| 7       | .0  | .0   | .9    | .6    | .0    | .0  | 1.5  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 8-9     | .0  | .0   | .2    | .0    | .0    | .0  | .2   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 10-11   | .0  | .0   | .2    | .2    | .0    | .0  | .3   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .1  | 4.2  | 8.2   | 1.7   | .0    | .0  | 14.3 | .0  | .4  | .2   | .0    | .0    | .0    | .0  | .0 | .6  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .3   | .0    | .0    | .0    | .0  | .3  |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |           |
| <1      | .2  | .0   | .0    | .0    | .0    | .0  | .2  | .2  | .0   | .0    | .0    | .0    | .0  | .2  | 99.3      |
| 1-2     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 3-4     | .0  | .3   | .0    | .0    | .0    | .0  | .3  | .0  | .2   | .0    | .0    | .0    | .0  | .2  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | .3   | .0    | .0    | .0    | .0  | .4  | .2  | .2   | .0    | .0    | .0    | .0  | .4  |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.1 | 2.9  | .0    | .0    | .0    | .0  | 5.0   | 582     |
| 1-2     | .2  | 13.2 | 5.5   | .0    | .0    | .0  | 18.9  |         |
| 3-4     | .0  | 10.5 | 23.4  | 1.2   | .0    | .0  | 35.1  |         |
| 5-6     | .0  | 1.4  | 22.7  | 1.9   | .0    | .0  | 25.9  |         |
| 7       | .0  | .0   | 7.4   | 2.9   | .0    | .0  | 10.3  |         |
| 8-9     | .0  | .0   | 1.2   | 1.5   | .0    | .0  | 2.7   |         |
| 10-11   | .0  | .0   | .7    | .9    | .0    | .0  | 1.5   |         |
| 12      | .0  | .0   | .0    | .2    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .0    | .3    | .0    | .0  | .3    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 2.2 | 28.0 | 60.8  | 8.9   | .0    | .0  | 100.0 |         |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2 | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|-----|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.2 | 6.7 | 15.6 | 10.7 | 2.7  | .6  | .2    | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 320   | 4        |
| 6-7          | .0  | 1.0 | 6.8  | 8.3  | 7.9  | 2.6 | 1.4   | .0 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 237   | 6        |
| 8-9          | .0  | .4  | 1.2  | 3.8  | 4.0  | 2.1 | 1.3   | .1 | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 112   | 7        |
| 10-11        | .0  | .4  | .7   | .6   | .8   | .8  | .2    | .2 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 32    | 6        |
| 12-13        | .0  | .0  | .4   | .5   | .7   | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 14    | 6        |
| 13-16        | .0  | .0  | .0   | .4   | .1   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 4     | 6        |
| 16-17        | .0  | .0  | .0   | .0   | .1   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 121   | 4        |
| INDET        | 2.4 | 1.3 | 4.2  | 3.2  | 1.5  | 1.4 | .4    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 840   | 5        |
| TOTAL PCT    | 3.6 | 9.6 | 28.8 | 27.5 | 17.9 | 7.7 | 3.6   | .6 | .6    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR       | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                     |
|----------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|---------------------|
|                | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG |
| N              | .4                 | .3        | .3   | .0        | .0   | .0              | *    | 1.0                     | .5             | .3        | 4.4         | .0                  | 2.8        | .6 90.4             |
| NE             | .3                 | .5        | .2   | .0        | .0   | .0              | *    | 1.0                     | .3             | .4        | 4.4         | .0                  | 2.6        | .4 90.8             |
| E              | .8                 | 1.2       | .3   | .0        | .0   | .0              | .1   | 2.5                     | .6             | 1.3       | 8.9         | .0                  | 2.1        | .2 84.5             |
| SE             | 3.5                | 1.3       | 1.5  | .0        | .0   | .0              | .0   | 5.3                     | 1.2            | .8        | 4.2         | .0                  | .9         | .4 87.5             |
| S              | 1.1                | 2.8       | .0   | .0        | .0   | .0              | .0   | 3.9                     | .0             | 1.6       | 2.7         | .0                  | 1.5        | .0 83.0             |
| SW             | 1.4                | 3.2       | .9   | .0        | .0   | .0              | .0   | 5.4                     | .3             | .9        | 4.7         | .0                  | .5         | .0 88.5             |
| W              | 4.0                | 2.2       | .2   | .0        | .0   | .0              | .0   | 6.2                     | .2             | .9        | 7.7         | .0                  | .5         | .0 85.2             |
| NW             | 1.3                | .6        | .0   | .0        | .0   | .0              | .0   | 1.8                     | .6             | .9        | 6.2         | .0                  | 3.2        | .8 86.6             |
| VAR            | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0 .0               |
| CALM           | .0                 | 1.2       | .0   | .0        | .0   | .0              | .0   | 1.2                     | .0             | 1.5       | .0          | .0                  | 2.0        | 1.1 94.1            |
| TOT PCT        | .6                 | .7        | .3   | .0        | .0   | .0              | *    | 1.5                     | .5             | .6        | 4.8         | .0                  | 2.6        | .4 89.6             |
| TOT OBS: 17788 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                     |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT)     | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                     |
|----------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|---------------------|
|                | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SIG |
| 00003          | .4                 | .5        | .3   | .0        | .0   | .0              | *    | 1.2                     | .5             | .9        | 3.3         | .0                  | 2.2        | .4 91.6             |
| 06009          | 1.0                | 1.2       | .4   | .0        | .0   | .0              | *    | 2.6                     | .5             | .9        | 5.8         | .0                  | 1.7        | .2 88.5             |
| 12015          | .4                 | .5        | .2   | .0        | .0   | .0              | .0   | 1.1                     | .4             | .1        | 3.8         | .0                  | 3.7        | .6 90.5             |
| 18021          | .5                 | .6        | .2   | .0        | .0   | .0              | *    | 1.3                     | .5             | .4        | 6.3         | .0                  | 3.0        | .6 87.9             |
| TOT PCT        | .6                 | .7        | .3   | .0        | .0   | .0              | *    | 1.6                     | .5             | .6        | 4.9         | .0                  | 2.6        | .4 89.5             |
| TOT OBS: 18223 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                     |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | 0-3 | WIND SPEED (KNOTS) |       |       |       |     |       | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |       |  |
|----------|-----|--------------------|-------|-------|-------|-----|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|-------|--|
|          |     | 4-10               | 11-21 | 22-33 | 34-47 | 48+ | 00    |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21    |  |
| N        | .9  | 7.9                | 8.6   | .9    | *     | .0  |       | 18.4         | 11.5        | 23.0        | 12.2       | 18.7  | 19.2  | 26.4  | 14.5  | 18.9  | 16.0  |  |
| NE       | 1.5 | 21.0               | 31.6  | 4.6   | .1    | *   |       | 58.8         | 12.8        | 59.9        | 57.5       | 57.1  | 58.1  | 58.9  | 59.6  | 60.5  | 58.7  |  |
| E        | .7  | 5.9                | 7.1   | 1.5   | .1    | *   |       | 15.2         | 12.7        | 9.0         | 21.6       | 15.3  | 15.7  | 7.4   | 19.3  | 13.7  | 17.8  |  |
| SE       | .3  | 1.2                | .6    | .1    | *     | .0  |       | 2.1          | 9.7         | 1.4         | 3.3        | 2.1   | 2.0   | 1.3   | 2.4   | 1.8   | 2.3   |  |
| S        | .2  | .4                 | .1    | *     | *     | .0  |       | .8           | 7.1         | 1.1         | .9         | .9    | .8    | .8    | .6    | .7    | .6    |  |
| SW       | .2  | .4                 | .1    | *     | .0    | .0  |       | .7           | 7.0         | .8          | .8         | .8    | .6    | .6    | .5    | .7    | .7    |  |
| W        | .2  | .4                 | .1    | *     | .0    | .0  |       | .7           | 6.1         | .7          | .6         | .8    | .6    | .6    | .7    | .7    | .7    |  |
| NW       | .3  | 1.2                | .5    | *     | .0    | .0  |       | 2.0          | 8.3         | 2.6         | 1.3        | 2.4   | 2.0   | 2.6   | 1.5   | 1.9   | 1.8   |  |
| VAR      | .0  | .0                 | .0    | .0    | .0    | .0  |       | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 1.4 |                    |       |       |       |     |       | 1.4          | .0          | 1.4         | 1.7        | 1.9   | 1.1   | 1.2   | 1.0   | 1.1   | 1.3   |  |
| TOT OBS  |     |                    |       |       |       |     | 67799 |              | 12.2        | 5774        | 7137       | 12613 | 8537  | 5876  | 6753  | 11938 | 9171  |  |
| TOT PCT  | 5.5 | 38.4               | 48.8  | 7.2   | .2    | *   |       | 100.0        |             | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 3.5                | 11.1 | 3.7   | .1    | .0  |           | 18.4     | 11.5     | 17.0       | 18.9  | 20.0  | 17.6  |    |
| NE       | 7.3                | 34.8 | 19.8  | .9    | *   |           | 58.8     | 12.8     | 58.7       | 57.5  | 59.4  | 59.7  |    |
| E        | 2.8                | 7.9  | 4.2   | .4    | *   |           | 15.2     | 12.7     | 15.9       | 15.5  | 13.7  | 13.5  |    |
| SE       | .8                 | .9   | .3    | *     | *   |           | 2.1      | 9.7      | 2.5        | 2.0   | 1.7   | 2.0   |    |
| S        | .4                 | .3   | .1    | *     | *   |           | .8       | 7.1      | .9         | .9    | .7    | .7    |    |
| SW       | .4                 | .2   | .1    | *     | .0  |           | .7       | 7.0      | .8         | .7    | .5    | .7    |    |
| W        | .4                 | .2   | *     | *     | .0  |           | .7       | 6.1      | .7         | .7    | .7    | .7    |    |
| NW       | .9                 | 1.0  | .2    | *     | .0  |           | 2.0      | 8.3      | 1.9        | 2.2   | 2.0   | 1.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.4                |      |       |       |     |           | 1.4      | .0       | 1.6        | 1.6   | 1.1   | 1.2   |    |
| TOT OBS  |                    |      |       |       |     | 67799     |          | 12.2     | 12911      | 21150 | 12629 | 21109 |    |
| TOT PCT  | 17.8               | 56.5 | 24.3  | 1.4   | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

# ANNUAL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 1.6  | 4.3 | 40.6 | 47.0               | 6.3   | .2    | .0  | 11.8 | 100.0    | 12911     |
| 06009 | 1.6  | 4.4 | 41.3 | 46.2               | 6.4   | .2    | .0  | 11.7 | 100.0    | 21150     |
| 12015 | 1.1  | 3.6 | 35.9 | 51.0               | 8.1   | .3    | *   | 12.7 | 100.0    | 12629     |
| 18021 | 1.2  | 4.0 | 35.5 | 51.1               | 8.0   | .3    | *   | 12.6 | 100.0    | 21109     |
| TOT   |      |     |      |                    |       |       |     | 12.2 |          | 67799     |
| PCT   | 1.4  | 4.1 | 38.4 | 48.8               | 7.2   | .2    | *   |      | 100.0    |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8-10 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|------|-----------|------------------|
| N        | 8.4  | 5.1  | 6.9  | 3.1  |           | 3.8              |
| NE       | 22.3 | 13.3 | 17.9 | 7.4  |           | 3.9              |
| E        | 3.1  | 1.8  | 2.5  | 1.1  |           | 3.8              |
| SE       | .4   | .3   | .4   | .3   |           | 4.0              |
| S        | .3   | .2   | .3   | .1   |           | 2.6              |
| SW       | .2   | .1   | .2   | .1   |           | 3.5              |
| W        | .2   | .1   | .3   | .1   |           | 2.7              |
| NW       | .7   | .6   | .8   | .4   |           | 3.7              |
| VAR      | .0   | .0   | .0   | .0   |           | .0               |
| CALM     | .5   | .2   | .2   | .2   |           | 2.7              |
| TOT OBS  |      |      |      |      | 11448     | 3.8              |
| TOT PCT  | 36.2 | 21.7 | 29.5 | 12.7 | 100.0     |                  |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| *          | *          | .2         | 1.1        | 2.8          | 1.5          | .8           | .2           | .1           | .2    | 16.6               |              |
| .1         | .1         | .4         | 2.6        | 6.7          | 3.8          | 2.0          | .7           | .3           | .5    | 43.9               |              |
| .0         | *          | .1         | .5         | 1.0          | .5           | .2           | .1           | *            | *     | 6.1                |              |
| *          | *          | *          | .1         | .2           | .1           | *            | *            | *            | *     | .9                 |              |
| .0         | .0         | *          | *          | .1           | *            | *            | *            | *            | *     | .7                 |              |
| .0         | .0         | *          | .1         | .1           | *            | *            | .0           | *            | *     | .4                 |              |
| .0         | .0         | *          | *          | .1           | *            | *            | *            | *            | .0    | .4                 |              |
| .0         | .0         | *          | .1         | .4           | .2           | .1           | *            | *            | *     | 1.7                |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| .0         | .0         | *          | *          | .1           | .1           | *            | .0           | *            | *     | .9                 |              |
|            |            |            |            |              |              |              |              |              |       |                    | 11448        |
| .1         | .1         | .6         | 4.4        | 11.4         | 6.1          | 3.2          | 1.1          | .5           | .8    | 71.5               | 100.0        |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500          | .9        | 1.3  | 1.3  | 1.3  | 1.3  | 1.3  | 1.3   | 1.3  |
| >5000          | 1.8       | 2.4  | 2.5  | 2.5  | 2.5  | 2.5  | 2.5   | 2.5  |
| >3500          | 4.4       | 5.5  | 5.7  | 5.7  | 5.7  | 5.7  | 5.7   | 5.7  |
| >2000          | 9.4       | 11.6 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8  | 11.8 |
| >1000          | 18.5      | 22.8 | 23.1 | 23.1 | 23.1 | 23.1 | 23.1  | 23.1 |
| >600           | 22.0      | 27.2 | 27.5 | 27.5 | 27.6 | 27.6 | 27.6  | 27.6 |
| >300           | 22.4      | 27.8 | 28.1 | 28.2 | 28.2 | 28.2 | 28.2  | 28.2 |
| >150           | 22.4      | 27.9 | 28.3 | 28.3 | 28.3 | 28.3 | 28.3  | 28.3 |
| >0             | 22.5      | 27.9 | 28.4 | 28.4 | 28.4 | 28.4 | 28.4  | 28.4 |

TOTAL NUMBER OF OBS: 11614

PCT FREQ NH <5/8: 71.6

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8   | 8 OBS | TOTAL OBS |
|------|------|------|------|-----|-----|-----|-----|-----|-------|-----------|
| 17.8 | 15.2 | 15.1 | 13.3 | 9.8 | 6.8 | 7.1 | 6.4 | 8.5 | *     | 12301     |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | *    | *    | .0  | .0 | .0 | .0 | *   | .0  | .0   | *     |              |
|              | TOT %  | *    | *    | *    | .0  | .0 | .0 | .0 | *   | .0  | .0   | *     |              |
| 1/2<1        | PCP    | *    | *    | *    | *   | .0 | .0 | *  | *   | .0  | .0   | .1    |              |
|              | NO PCP | .7   | 2.2  | 1.0  | .1  | *  | *  | *  | .1  | .0  | .0   | 4.2   |              |
|              | TOT %  | .7   | 2.3  | 1.0  | .1  | *  | *  | *  | .1  | .0  | .0   | 4.3   |              |
| 1<2          | PCP    | *    | .0   | *    | *   | .0 | .0 | .0 | *   | .0  | .0   | *     |              |
|              | NO PCP | .1   | .5   | .1   | *   | .0 | .0 | .0 | *   | .0  | .0   | .8    |              |
|              | TOT %  | .1   | .5   | .1   | *   | .0 | .0 | .0 | *   | .0  | .0   | .8    |              |
| 2<5          | PCP    | *    | *    | *    | *   | *  | *  | .0 | *   | .0  | .0   | .1    |              |
|              | NO PCP | .2   | .6   | .1   | *   | *  | *  | .0 | .1  | .0  | .0   | 1.0   |              |
|              | TOT %  | .2   | .6   | .1   | *   | *  | *  | .0 | .1  | .0  | .0   | 1.0   |              |
| 5<10         | PCP    | .1   | .4   | .2   | .1  | *  | .1 | *  | *   | .0  | .0   | 1.0   |              |
|              | NO PCP | 6.6  | 17.7 | 4.8  | .6  | .3 | .2 | .2 | .7  | .0  | .2   | 31.3  |              |
|              | TOT %  | 6.7  | 18.1 | 5.0  | .7  | .3 | .3 | .3 | .7  | .0  | .2   | 32.3  |              |
| 10+          | PCP    | .1   | .2   | .1   | *   | *  | *  | *  | *   | .0  | *    | .4    |              |
|              | NO PCP | 13.9 | 37.9 | 5.3  | .8  | .5 | .4 | .4 | 1.5 | .0  | .6   | 61.3  |              |
|              | TOT %  | 14.0 | 38.1 | 5.3  | .8  | .5 | .4 | .4 | 1.5 | .0  | .6   | 61.6  |              |
| TOT OBS      |        |      |      |      |     |    |    |    |     |     |      |       | 17778        |
| TOT PCT      |        | 21.7 | 59.6 | 11.6 | 1.7 | .8 | .7 | .7 | 2.4 | .0  | .8   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE  | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|-----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | *    | *   | .0 | .0 | .0 | *   | .0  | .0   | *     |              |
|              | 11-21      | *    | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | TOT %      | *    | *    | *    | .0  | .0 | .0 | .0 | *   | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | *    | *    | *    | *   | *  | *  | *  | *   | .0  | *    | .1    |              |
|              | 4-10       | .2   | .3   | .1   | *   | *  | *  | *  | *   | .0  | .0   | .7    |              |
|              | 11-21      | .1   | .7   | .3   | *   | *  | .0 | *  | *   | .0  | .0   | 1.2   |              |
|              | 22+        | *    | .2   | .1   | .0  | .0 | .0 | .0 | *   | .0  | .0   | .2    |              |
|              | TOT %      | .4   | 1.2  | .5   | .1  | *  | *  | *  | .1  | .0  | *    | 2.3   |              |
| 1<2          | 0-3        | *    | *    | *    | .0  | .0 | *  | *  | *   | .0  | *    | .2    |              |
|              | 4-10       | *    | .1   | *    | *   | .0 | *  | *  | *   | .0  | .0   | .4    |              |
|              | 11-21      | .1   | .2   | .1   | .0  | .0 | .0 | .0 | *   | .0  | .0   | .1    |              |
|              | 22+        | *    | .1   | *    | *   | .0 | .0 | .0 | *   | .0  | .0   | .7    |              |
|              | TOT %      | .1   | .5   | .1   | *   | .0 | *  | *  | *   | .0  | *    | .7    |              |
| 2<5          | 0-3        | *    | *    | *    | *   | *  | *  | *  | *   | .0  | *    | .2    |              |
|              | 4-10       | .2   | .5   | .1   | *   | *  | *  | *  | *   | .0  | .0   | 1.0   |              |
|              | 11-21      | .2   | .8   | .1   | *   | *  | *  | *  | *   | .0  | .0   | 1.3   |              |
|              | 22+        | *    | .2   | .1   | *   | *  | *  | .0 | *   | .0  | .0   | .3    |              |
|              | TOT %      | .5   | 1.6  | .3   | .1  | *  | *  | *  | .1  | .0  | *    | 2.7   |              |
| 5<10         | 0-3        | .3   | .4   | .2   | .1  | .1 | .1 | *  | .1  | .0  | .3   | 1.4   |              |
|              | 4-10       | 2.3  | 5.6  | 1.7  | .3  | .1 | .1 | .1 | .4  | .0  | .0   | 10.6  |              |
|              | 11-21      | 3.0  | 8.8  | 1.7  | .1  | *  | .1 | *  | .2  | .0  | .0   | 14.0  |              |
|              | 22+        | .4   | 1.3  | .3   | *   | *  | *  | *  | *   | .0  | .0   | 2.0   |              |
|              | TOT %      | 5.9  | 16.1 | 3.9  | .6  | .2 | .2 | .2 | .6  | .0  | .3   | 28.0  |              |
| 10+          | 0-3        | .6   | 1.0  | .4   | .2  | .1 | .1 | .1 | .2  | .0  | .8   | 3.4   |              |
|              | 4-10       | 6.3  | 15.7 | 3.4  | .6  | .3 | .2 | .3 | 1.0 | .0  | .0   | 27.9  |              |
|              | 11-21      | 6.7  | 21.8 | 2.6  | .2  | .1 | .1 | .1 | .4  | .0  | .0   | 31.8  |              |
|              | 22+        | .5   | 2.3  | .3   | *   | *  | *  | *  | *   | .0  | .0   | 3.2   |              |
|              | TOT %      | 14.1 | 40.7 | 6.7  | 1.0 | .5 | .4 | .5 | 1.6 | .0  | .8   | 66.3  |              |
| TOT OBS      |            |      |      |      |     |    |    |    |     |     |      |       | 35166        |
| TOT PCT      |            | 21.0 | 60.0 | 11.6 | 1.7 | .8 | .7 | .7 | 2.4 | .0  | 1.1  | 100.0 |              |



PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .2         | .1         | .6         | 4.5        | 10.2         | 4.4          | 2.5          | 1.2          | .4           | .7    | 24.7  | 75.3               | 2957         |
| 06009         | .1         | .2         | .7         | 4.8        | 12.3         | 6.7          | 3.3          | 1.5          | .7           | .6    | 30.8  | 69.2               | 2860         |
| 12015         | .1         | *          | .6         | 4.2        | 10.7         | 7.0          | 4.0          | .9           | .6           | .9    | 29.1  | 70.9               | 3210         |
| 18021         | *          | .2         | .6         | 3.8        | 10.6         | 5.4          | 2.5          | 1.1          | .4           | .9    | 25.4  | 74.6               | 3028         |
| TOT           |            |            |            |            |              |              |              |              |              |       |       |                    | 12055        |
| PCT           | .1         | .1         | .6         | 4.3        | 10.9         | 5.9          | 3.1          | 1.1          | .5           | .8    | 27.5  | 72.5               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .1   | 1.7   | .5  | 2.3 | 27.7 | 67.8 | 7431         |
| 06009         | .1   | 2.7   | .8  | 2.2 | 30.1 | 64.2 | 10339        |
| 12015         | .1   | 1.9   | .7  | 2.8 | 24.1 | 70.5 | 7340         |
| 18021         | *    | 2.7   | .9  | 3.2 | 29.8 | 63.4 | 10496        |
| TOT           |      |       |     |     |      |      | 35606        |
| PCT           | *    | 2.3   | .7  | 2.6 | 28.3 | 66.0 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .2           | .9         | 6.4         | 19.8            | 73.8              | 2838         |
| 06009         | .1           | 1.0        | 6.8         | 25.8            | 67.4              | 2743         |
| 12015         | .1           | .8         | 6.4         | 24.4            | 69.1              | 3109         |
| 18021         | *            | .8         | 6.5         | 21.1            | 72.4              | 2926         |
| TOT           |              |            |             |                 |                   | 11616        |
| PCT           | .1           | .9         | 6.5         | 22.8            | 70.7              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | *     | *     | .0    | .0    | .0     | *            | *           |
| 85/89  | .0   | *     | .0    | .1    | .3    | .4    | .1    | *      | .8           | *           |
| 80/84  | .0   | .0    | *     | .1    | 1.5   | 4.8   | 4.8   | .9     | 12.2         | *           |
| 75/79  | .0   | .0    | *     | .2    | 3.1   | 15.6  | 15.3  | 4.7    | 38.9         | *           |
| 70/74  | .0   | .0    | .0    | .4    | 5.7   | 15.7  | 14.3  | 4.7    | 40.9         | *           |
| 65/69  | .0   | .0    | .0    | .1    | .9    | 2.7   | 2.6   | .8     | 7.2          | *           |
| 60/64  | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | *            | *           |
| TOTAL  |      |       |       |       |       |       |       |        | 12308        | 100.0       |
| PCT    | .0   | *     | .1    | 1.0   | 11.5  | 39.2  | 37.1  | 11.2   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S  | SW | W  | NW  | VAR | CALM |
|-------|------|------|-----|-----|----|----|----|-----|-----|------|
| 90/94 | *    | *    | *   | .0  | .0 | .0 | .0 | *   | .0  | .0   |
| 85/89 | .3   | .3   | .1  | *   | *  | *  | *  | *   | .0  | *    |
| 80/84 | 2.9  | 6.0  | 1.3 | .4  | .3 | .2 | .2 | .6  | .0  | .3   |
| 75/79 | 8.6  | 23.3 | 3.6 | .7  | .4 | .3 | .4 | 1.1 | .0  | .5   |
| 70/74 | 10.1 | 26.5 | 2.9 | .3  | .1 | .1 | .1 | .7  | .0  | .2   |
| 65/69 | 1.3  | 5.0  | .6  | *   | *  | *  | *  | .1  | .0  | .1   |
| 60/64 | .0   | *    | .0  | .0  | .0 | .0 | .0 | .0  | .0  | .0   |
| TOTAL | 23.2 | 61.2 | 8.6 | 1.5 | .8 | .6 | .7 | 2.4 | .0  | 1.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 89  | 78  | 77  | 74  | 71 | 69 | 59  | 73.7 | 12844        |
| 06009         | 89  | 79  | 77  | 74  | 70 | 69 | 62  | 73.8 | 20934        |
| 12015         | 93  | 84  | 81  | 76  | 73 | 71 | 58  | 76.7 | 12039        |
| 18021         | 92  | 83  | 80  | 75  | 72 | 70 | 59  | 75.6 | 20408        |
| TOT           | 93  | 82  | 80  | 75  | 71 | 69 | 58  | 74.9 | 66245        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .5    | 6.2   | 33.0  | 46.2  | 14.0   | 81   | 3113         |
| 06009         | .0   | .6    | 6.9   | 30.5  | 45.2  | 16.7   | 81   | 3152         |
| 12015         | .0   | 1.6   | 19.0  | 47.0  | 25.9  | 6.5    | 76   | 3141         |
| 18021         | .0   | 1.4   | 14.0  | 46.2  | 30.9  | 7.5    | 77   | 3132         |
| TOT           | 0    | 130   | 1442  | 4929  | 4636  | 1401   | 79   | 12538        |

PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1894-1973

# ANNUAL

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FUG | WG<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | .0       | 3     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | .0       | 16    | .0       | .1        |
| 9/10               | .0       | .0       | .0       | *        | *        | .1       | .1       | .1       | *        | 52    | *        | .3        |
| 7/8                | .0       | .0       | .0       | *        | .1       | .2       | .2       | .2       | *        | 113   | *        | .7        |
| 6                  | .0       | .0       | .0       | *        | .1       | .2       | .2       | .1       | .0       | 104   | *        | .6        |
| 5                  | .0       | .0       | .0       | *        | .2       | .5       | .3       | .1       | *        | 191   | .1       | 1.1       |
| 4                  | .0       | .0       | *        | .1       | .5       | .7       | .5       | .1       | .0       | 342   | .1       | 1.9       |
| 3                  | .0       | .0       | *        | .2       | 1.1      | .9       | .7       | .1       | .0       | 512   | .2       | 2.9       |
| 2                  | .0       | .0       | .0       | .5       | 2.1      | 1.9      | 1.3      | *        | .0       | 967   | .3       | 5.5       |
| 1                  | .0       | .0       | *        | 1.4      | 4.1      | 3.4      | 1.5      | *        | .0       | 1742  | .7       | 9.8       |
| 0                  | .0       | .0       | .2       | 4.2      | 6.7      | 6.0      | 1.4      | *        | .0       | 3063  | 1.1      | 17.4      |
| -1                 | .0       | .0       | .5       | 6.2      | 7.7      | 6.9      | .7       | *        | .0       | 3647  | 1.2      | 20.8      |
| -2                 | *        | .0       | .7       | 6.1      | 5.6      | 4.0      | .2       | *        | .0       | 2720  | .6       | 19.9      |
| -3                 | .0       | .0       | .7       | 4.1      | 2.9      | 1.8      | .1       | .0       | .0       | 1563  | .3       | 9.2       |
| -4                 | .0       | .0       | .4       | 2.0      | 1.5      | .9       | *        | .0       | .0       | 777   | .1       | 4.7       |
| -5                 | .0       | .0       | .2       | 1.0      | .8       | .5       | *        | .0       | .0       | 421   | *        | 2.6       |
| -6                 | .0       | .0       | .2       | .4       | .3       | .1       | *        | .0       | .0       | 162   | *        | 1.0       |
| -7/-8              | .0       | *        | .1       | .3       | .2       | .1       | *        | .0       | .0       | 110   | *        | .7        |
| -9/-10             | .0       | *        | *        | *        | *        | *        | .0       | .0       | .0       | 23    | .0       | .1        |
| -11/-13            | .0       | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | 6     | .0       | *         |
| TOTAL              |          |          |          |          |          |          |          |          |          | 16534 |          |           |
| PCT                | *        | *        | 3.2      | 26.6     | 33.9     | 28.1     | 7.2      | .8       | .1       | 100.0 | 4.8      | 95.2      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .3  | .7   | .1    | .0    | .0    | .0  | 1.2  | .4  | 1.3  | .1    | .0    | .0    | .0  | 1.8  |
| 1-2     | .3  | 5.0  | 2.3   | .0    | .0    | .0  | 7.6  | .4  | 10.3 | 5.8   | .0    | .0    | .0  | 16.5 |
| 3-4     | .1  | 2.9  | 4.9   | .3    | .0    | .0  | 8.2  | .1  | 6.7  | 14.1  | .6    | .0    | .0  | 21.5 |
| 5-6     | .0  | .6   | 3.7   | .3    | .0    | .0  | 4.6  | .0  | 1.3  | 11.3  | 1.3   | *     | .0  | 13.9 |
| 7       | .0  | .1   | 1.5   | .2    | *     | .0  | 1.8  | *   | .3   | 4.1   | 1.4   | *     | .0  | 5.8  |
| 8-9     | .0  | .0   | .2    | .2    | .0    | .0  | .4   | .0  | *    | 1.1   | .6    | *     | .0  | 1.7  |
| 10-11   | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | .2    | .3    | .0    | .0  | .5   |
| 12      | .0  | .0   | *     | *     | .0    | .0  | *    | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *     | *     | .0    | .0  | *    |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 9.3  | 12.8  | 1.1   | *     | .0  | 24.0 | .9  | 19.9 | 36.6  | 4.3   | .1    | .0  | 61.8 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .4   | .0    | .0    | .0    | .0  | .5  | .1  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .1  | 2.1  | .5    | .0    | .0    | .0  | 2.8 | .1  | .4   | .0    | .0    | .0    | .0  | .5  |
| 3-4     | *   | .9   | 1.5   | .1    | .0    | .0  | 2.5 | .0  | .2   | .1    | .0    | .0    | .0  | .3  |
| 5-6     | *   | .2   | 1.0   | .2    | .0    | .0  | 1.4 | .0  | *    | *     | *     | .0    | .0  | .1  |
| 7       | .0  | .0   | .4    | .2    | *     | .0  | .6  | .0  | .0   | *     | .0    | *     | .0  | *   |
| 8-9     | .0  | .0   | .1    | *     | *     | .0  | .1  | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 3.6  | 3.5   | .5    | *     | .0  | 8.0 | .2  | .7   | .2    | *     | *     | .0  | 1.1 |

PERIOD: (OVER-ALL) 1963-1973

ANNUAL  
TABLE 18 (CONT)AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | *    | .0    | .0    | .0    | .0  | .1  | *   | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | *   | .3   | .0    | .0    | .0    | .0  | .3  | *   | .2   | *     | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .1   | *     | .0    | .0    | .0  | .2  | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | *   | .0  | *    | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .5   | .1    | .0    | .0    | .0  | .7  | *   | .3   | .1    | .0    | .0    | .0  | .5  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | *    | .0    | .0    | .0    | .0  | .1  | .1  | .2   | .0    | .0    | .0    | .0  | .3  |           |
| 1-2     | *   | .2   | *     | .0    | .0    | .0  | .2  | .1  | .7   | .2    | .0    | .0    | .0  | 1.0 |           |
| 3-4     | .0  | .1   | .1    | *     | .0    | .0  | .2  | .4  | *    | *     | .0    | .0    | .0  | .8  |           |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | .1  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |           |
| 7       | .0  | *    | *     | .0    | .0    | .0  | *   | .0  | *    | *     | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | *     | .0    | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | .4   | .1    | *     | .0    | .0  | .6  | .2  | 1.3  | .8    | *     | .0    | .0  | 2.3 | 98.9      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT DBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.8 | 2.9  | .2    | .0    | .0    | .0  | 5.9   |         |
| 1-2     | 1.3 | 19.0 | 8.8   | .0    | .0    | .0  | 29.1  |         |
| 3-4     | .2  | 11.3 | 20.9  | 1.0   | .0    | .0  | 33.3  |         |
| 5-6     | .1  | 2.2  | 16.0  | 1.8   | *     | .0  | 20.2  |         |
| 7       | *   | .3   | 6.1   | 1.8   | .1    | .0  | 8.3   |         |
| 8-9     | .0  | *    | 1.4   | .8    | *     | .0  | 2.3   |         |
| 10-11   | .0  | .0   | .3    | .4    | .0    | .0  | .7    |         |
| 12      | .0  | .0   | *     | .1    | .0    | .0  | .1    |         |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | *     |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.3 | 35.8 | 53.7  | 6.0   | .1    | .0  | 100.0 | 6644    |

PERIOD: (OVER-ALL) 1949-1973

## TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.7 | 9.3  | 13.9 | 8.6  | 3.2  | .9  | .3    | .1 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 3572     |
| 6-7          | *   | .9   | 8.1  | 10.7 | 5.7  | 2.1 | .9    | .3 | .1    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 2718     |
| 8-9          | .0  | .4   | 1.9  | 3.9  | 3.1  | 1.5 | .8    | .3 | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1138     |
| 10-11        | .0  | .4   | .6   | 1.0  | 1.0  | .8  | .3    | .1 | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 407      |
| 12-13        | .0  | .0   | .6   | .5   | .3   | .2  | .1    | *  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 173      |
| >13          | .0  | .0   | .0   | .2   | .2   | .1  | .1    | *  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 55       |
| MEAN         | 1.4 | 2.6  | 4.6  | 3.2  | 1.6  | .5  | .2    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1339     |
| TOTAL        |     |      |      |      |      |     |       |    |       |       |       |       |       |       |       |       |       |       |     |       | 9402     |
| PCT          | 3.2 | 13.6 | 29.8 | 28.0 | 15.3 | 6.0 | 2.7   | .8 | .6    | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |



PERIOD: (PRIMARY) 1892-1973  
(OVER-ALL) 1854-1973

TABLE 20

AREA 0007 CAPE VERDE ISLANDS  
15.5N 23.9W

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

| SEA TMP<br>DEG F | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANN   | PCT   |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| 96*              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 95/96            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 93/94            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 91/92            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 89/90            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 87/88            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .1   | .1   | *    | *    | .0   | 11    | *     |
| 85/86            | .0   | .0   | .0   | .0   | .0   | .0   | *    | .2   | .3   | .2   | *    | .0   | 46    | .1    |
| 83/84            | .0   | *    | .0   | *    | .0   | *    | .3   | 1.3  | 3.2  | 2.0  | .8   | .1   | 418   | .6    |
| 81/82            | .2   | .1   | .1   | .0   | .1   | .4   | 2.6  | 12.7 | 27.4 | 21.9 | 7.5  | .8   | 4025  | 6.2   |
| 79/80            | .5   | .3   | .2   | .2   | .5   | 2.2  | 10.7 | 33.9 | 41.8 | 44.5 | 23.7 | 4.7  | 8896  | 13.8  |
| 77/78            | 2.2  | .9   | 1.2  | 1.0  | 3.3  | 9.4  | 27.1 | 34.0 | 21.8 | 24.9 | 38.9 | 15.9 | 9868  | 15.3  |
| 75/76            | 10.5 | 4.4  | 5.3  | 7.2  | 14.0 | 27.7 | 33.7 | 14.4 | 4.5  | 5.6  | 21.9 | 31.4 | 9877  | 15.3  |
| 73/74            | 33.2 | 20.3 | 22.3 | 29.0 | 37.3 | 39.5 | 21.8 | 3.1  | .7   | .7   | 6.4  | 34.2 | 13391 | 20.8  |
| 71/72            | 34.3 | 34.2 | 34.3 | 35.9 | 31.1 | 16.8 | 3.3  | .3   | .2   | .1   | .6   | 10.4 | 10602 | 16.4  |
| 69/70            | 15.6 | 28.8 | 26.2 | 21.0 | 11.6 | 3.1  | .5   | *    | .0   | *    | .1   | 2.0  | 5620  | 8.7   |
| 67/68            | 3.0  | 9.7  | 9.0  | 4.9  | 1.7  | .5   | .0   | .0   | *    | *    | *    | .4   | 1492  | 2.3   |
| 65/66            | 4.0  | 1.1  | 1.1  | .4   | .2   | .3   | *    | .0   | .0   | .0   | .0   | .1   | 188   | .3    |
| 63/64            | .1   | .2   | .2   | .3   | *    | .1   | .0   | .0   | .0   | .0   | .0   | *    | 47    | .1    |
| 61/62            | *    | *    | .0   | .0   | *    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 6     | *     |
| 59/60            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 57/58            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 55/56            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 53/54            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 51/52            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 49/50            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 47/48            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 45/46            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 43/44            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 41/42            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 39/40            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 37/38            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 35/36            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 33/34            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 31/32            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 29/30            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| 27/28            | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| <27              | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | 0     | .0    |
| TOTAL            | 4539 | 4571 | 5333 | 5626 | 6004 | 5890 | 5842 | 5338 | 5457 | 5424 | 5261 | 5002 | 64487 | 100.0 |
| MEAN             | 72.2 | 71.1 | 71.2 | 71.7 | 72.7 | 74.0 | 76.0 | 78.3 | 79.5 | 79.2 | 77.5 | 74.7 | 74.8  |       |

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

| MO  | 0000 | 0300 | 0600 | 0900 | 1200 | 1500 | 1800 | 2100 | MEAN | TOTAL<br>OBS |
|-----|------|------|------|------|------|------|------|------|------|--------------|
| JAN | 1016 | 1016 | 1015 | 1016 | 1016 | 1016 | 1014 | 1016 | 1015 | 2328         |
| FEB | 1016 | 1016 | 1015 | 1016 | 1016 | 1016 | 1014 | 1016 | 1015 | 2403         |
| MAR | 1016 | 1015 | 1014 | 1016 | 1016 | 1015 | 1014 | 1015 | 1015 | 2847         |
| APR | 1015 | 1016 | 1014 | 1016 | 1016 | 1016 | 1014 | 1015 | 1015 | 2890         |
| MAY | 1016 | 1016 | 1014 | 1016 | 1016 | 1016 | 1014 | 1015 | 1015 | 2827         |
| JUN | 1016 | 1016 | 1015 | 1016 | 1016 | 1017 | 1015 | 1016 | 1016 | 2768         |
| JUL | 1015 | 1015 | 1014 | 1015 | 1015 | 1015 | 1014 | 1015 | 1015 | 2741         |
| AUG | 1014 | 1014 | 1013 | 1014 | 1014 | 1014 | 1013 | 1013 | 1013 | 2454         |
| SEP | 1014 | 1014 | 1013 | 1014 | 1014 | 1014 | 1012 | 1013 | 1013 | 2550         |
| OCT | 1015 | 1014 | 1013 | 1014 | 1015 | 1014 | 1013 | 1014 | 1014 | 2622         |
| NOV | 1015 | 1015 | 1014 | 1015 | 1015 | 1014 | 1013 | 1015 | 1014 | 2503         |
| DEC | 1016 | 1016 | 1014 | 1016 | 1015 | 1015 | 1014 | 1015 | 1015 | 2477         |
| ANN | 1015 | 1015 | 1014 | 1015 | 1015 | 1015 | 1014 | 1015 | 1015 | 31410        |
| OBS | 4406 | 2394 | 6259 | 2844 | 4319 | 2176 | 6092 | 2920 |      |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 1008 | 1010 | 1012 | 1014 | 1015 | 1017 | 1019 | 1021 | 1025 |
| FEB | 1006 | 1009 | 1011 | 1014 | 1016 | 1017 | 1019 | 1021 | 1026 |
| MAR | 1007 | 1010 | 1012 | 1013 | 1015 | 1016 | 1018 | 1020 | 1024 |
| APR | 1005 | 1009 | 1012 | 1014 | 1015 | 1016 | 1018 | 1020 | 1024 |
| MAY | 1003 | 1009 | 1012 | 1014 | 1015 | 1016 | 1018 | 1020 | 1024 |
| JUN | 1005 | 1010 | 1012 | 1015 | 1016 | 1017 | 1019 | 1021 | 1024 |
| JUL | 1003 | 1008 | 1011 | 1014 | 1015 | 1016 | 1018 | 1020 | 1023 |
| AUG | 1003 | 1008 | 1010 | 1012 | 1013 | 1015 | 1017 | 1019 | 1022 |
| SEP | 1003 | 1007 | 1009 | 1012 | 1014 | 1015 | 1017 | 1019 | 1022 |
| OCT | 1006 | 1008 | 1011 | 1013 | 1014 | 1015 | 1017 | 1019 | 1021 |
| NOV | 1003 | 1009 | 1011 | 1013 | 1014 | 1016 | 1017 | 1019 | 1023 |
| DEC | 1004 | 1009 | 1011 | 1013 | 1015 | 1016 | 1019 | 1021 | 1026 |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0008 DAKAR  
14.8N 17.8W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FOG WU PCPN | FOG WU PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
|                    |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |
| N                  | .2   | .1        | *    | .0        | .0   | .0              | .0   | .2              | .1             | .6                      | 2.6         | .1                  | 2.4        | .7              | 93.4       |
| NE                 | .2   | .1        | .1   | .0        | .0   | .0              | .0   | .4              | *              | .3                      | 2.4         | .0                  | 3.9        | 1.7             | 91.3       |
| E                  | .6   | .0        | .3   | .0        | .0   | .0              | .8   | 1.6             | .0             | .4                      | 1.9         | .0                  | 13.8       | 4.6             | 77.8       |
| SE                 | 2.6  | .0        | .0   | .0        | .0   | .0              | .0   | 2.6             | .0             | .0                      | 2.1         | .0                  | 10.4       | .0              | 85.0       |
| S                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | 100.0      |
| SW                 | .7   | .0        | .0   | .0        | .0   | .0              | .7   | 1.3             | .0             | .0                      | .0          | .0                  | 5.3        | 1.3             | 92.0       |
| W                  | 3.2  | 1.8       | .0   | .0        | .0   | .0              | 1.4  | 6.4             | .0             | 1.8                     | .0          | 1.8                 | 1.8        | 4.1             | 84.0       |
| NW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .9                      | 3.4         | .3                  | 4.4        | .5              | 90.5       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .8   | .0        | .0   | .0        | .0   | .0              | .0   | .8              | .0             | .0                      | 2.4         | .8                  | 5.7        | 1.6             | 88.6       |
| TOT PCT            | .2   | .1        | .1   | .0        | .0   | .0              | .1   | .4              | *              | .5                      | 2.5         | .1                  | 3.8        | 1.3             | 91.4       |
| TOT OBS:           | 6922 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                    |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|--------------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG<br>WEA |
| 00003         | .4                 | .0           | .2   | .0           | .0   | .0                    | .0   | .5                      | .0                | .8           | 2.0               | .0                        | 2.8           | 1.5                | 92.5             |
| 06009         | .3                 | .1           | .2   | .0           | .0   | .0                    | .2   | .7                      | .1                | 1.0          | 3.2               | .1                        | 3.4           | 1.0                | 90.5             |
| 12015         | .3                 | .1           | .0   | .0           | .0   | .0                    | .1   | .5                      | .1                | .1           | 1.6               | .2                        | 3.7           | 1.8                | 92.2             |
| 18021         | .2                 | .1           | .0   | .0           | .0   | .0                    | .0   | .3                      | .0                | .1           | 3.4               | .0                        | 5.2           | 1.2                | 89.7             |
| TOT PCT       | .3                 | .1           | .1   | .0           | .0   | .0                    | .1   | .5                      | *                 | .5           | 2.6               | .1                        | 3.8           | 1.4                | 91.2             |
| TOT OBS:      | 7082               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                    |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | 0-3 | WIND SPEED (KNOTS) |       |       |       |    |       | 48+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |  |
|----------|-----|--------------------|-------|-------|-------|----|-------|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|--|
|          |     | 4-10               | 11-21 | 22-33 | 34-47 | 00 | 03    |       |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |  |
| N        | 1.4 | 18.9               | 20.9  | 1.5   | *     | .0 |       | 42.8  | 11.4         | 49.2        | 57.1        | 44.7       | 30.3  | 35.1  | 47.0  | 46.3  | 44.0  |  |
| NE       | 1.0 | 15.8               | 21.3  | 2.8   | .1    | .0 |       | 40.9  | 12.6         | 35.1        | 25.9        | 40.7       | 50.7  | 46.8  | 43.8  | 37.5  | 39.7  |  |
| E        | .5  | 3.8                | 3.3   | .6    | *     | .0 |       | 8.2   | 11.6         | 5.4         | 6.0         | 7.3        | 13.4  | 12.1  | 5.6   | 6.4   | 6.6   |  |
| SE       | .1  | .6                 | .1    | *     | .0    | .0 |       | .8    | 7.3          | .6          | .6          | .6         | 1.3   | 1.1   | .8    | .9    | .6    |  |
| S        | .2  | .3                 | .1    | .0    | .0    | .0 |       | .5    | 5.8          | .6          | .0          | .6         | .4    | .4    | .0    | .4    | .3    |  |
| SW       | .2  | .2                 | .1    | .0    | *     | .0 |       | .5    | 7.2          | .6          | .6          | .5         | .5    | .3    | .0    | .7    | .7    |  |
| W        | .2  | .4                 | .1    | *     | .0    | .0 |       | .7    | 6.9          | .7          | .6          | .5         | 1.0   | .5    | .0    | .7    | 1.5   |  |
| NW       | .4  | 2.6                | .9    | *     | *     | .0 |       | 4.0   | 8.4          | 5.5         | 6.0         | 3.3        | 1.7   | 2.3   | 2.9   | 5.2   | 5.3   |  |
| VAR      | .0  | .0                 | .0    | .0    | .0    | .0 |       | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 1.7 |                    |       |       |       |    |       | 1.7   | .0           | 2.1         | 3.1         | 1.9        | .8    | 1.4   | .0    | 1.9   | 1.4   |  |
| TOT OBS  | 699 | 5271               | 5795  | 613   | 22    | 0  | 12400 |       | 11.5         | 2475        | 162         | 2457       | 1118  | 2526  | 165   | 2350  | 1147  |  |
| TOT PCT  | 5.6 | 42.5               | 46.7  | 4.9   | .2    | .0 |       | 100.0 |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 18    |
| N        | 7.3                | 28.6 | 6.8   | .1    | .0  |           | 42.8     | 11.4     | 49.7       | 40.2  | 35.8  | 45.5  |
| NE       | 5.5                | 25.1 | 9.7   | .6    | *   |           | 40.9     | 12.6     | 34.6       | 43.8  | 40.6  | 38.2  |
| E        | 1.9                | 4.4  | 1.7   | .1    | *   |           | 8.2      | 11.6     | 5.5        | 9.2   | 11.7  | 6.5   |
| SE       | .5                 | .3   | *     | *     | .0  |           | .8       | 7.3      | .6         | .8    | 1.1   | .8    |
| S        | .3                 | .1   | *     | .0    | .0  |           | .5       | 5.8      | .6         | .5    | .4    | .4    |
| SW       | .3                 | .2   | *     | .0    | .0  |           | .5       | 7.2      | .6         | .5    | .3    | .7    |
| W        | .5                 | .2   | *     | .0    | .0  |           | .7       | 6.9      | .7         | .6    | .5    | 1.0   |
| NW       | 1.6                | 2.1  | .2    | *     | .0  |           | 4.0      | 8.4      | 5.5        | 2.8   | 2.3   | 5.2   |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |
| CALM     | 1.7                |      |       |       |     |           | 1.7      | .0       | 2.2        | 1.5   | 1.3   | 1.7   |
| TOT OBS  | 2428               | 7572 | 2787  | 111   | 2   | 12400     |          | 11.5     | 2637       | 3375  | 2691  | 3497  |
| TOT PCT  | 19.6               | 61.1 | 18.4  | .9    | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

# JANUARY

AREA 0008 DAKAR  
14.8N 17.8W

TABLE 4

## PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|-----|------|--------------------|-------|-------|----|------|----------|-----------|
|      |      |     |      | 11-21              | 22-33 | 34-47 |    |      |          |           |
| 0000 | 2.2  | 3.7 | 45.2 | 44.7               | 4.1   | *     | .0 | 11.1 | 100.0    | 2637      |
| 0600 | 1.5  | 3.4 | 41.7 | 48.0               | 5.2   | .2    | .0 | 11.7 | 100.0    | 3575      |
| 1200 | 1.3  | 3.2 | 38.7 | 50.1               | 6.4   | .3    | .0 | 12.2 | 100.0    | 2691      |
| 1800 | 1.7  | 5.3 | 44.3 | 44.3               | 4.2   | .1    | .0 | 11.0 | 100.0    | 3497      |
| TOT  | 209  | 490 | 5271 | 5795               | 613   | 22    | 0  | 11.5 |          | 12400     |
| PCT  | 1.7  | 4.0 | 42.5 | 46.7               | 4.9   | .2    | .0 |      | 100.0    |           |

TABLE 5

## PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL CLOUD DBSCD | MEAN CLOUD COVER |
|----------|------|------|------|-------|-------------------|------------------|
| N        | 35.5 | 5.6  | 7.1  | 3.5   |                   | 2.0              |
| NE       | 23.4 | 4.1  | 5.1  | 2.2   |                   | 2.0              |
| E        | 3.3  | .6   | .8   | .3    |                   | 2.1              |
| SE       | .3   | .1   | .1   | .2    |                   | 3.4              |
| S        | .3   | .1   | *    | .1    |                   | 2.2              |
| SW       | .3   | *    | *    | .1    |                   | 2.5              |
| W        | .2   | .1   | .1   | .1    |                   | 3.5              |
| NW       | 2.7  | .6   | 1.0  | .3    |                   | 2.3              |
| VAR      | .0   | .0   | .0   | .0    |                   | .0               |
| CALM     | 1.0  | .2   | .3   | .3    |                   | 2.9              |
| TOT OBS  | 3649 | 618  | 788  | 379   | 5434              | 2.0              |
| TOT PCT  | 67.2 | 11.4 | 14.5 | 7.0   | 100.0             |                  |

TABLE 6

## PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .1  | .0  | *   | .3  | 1.2  | .7   | .5   | .3   | .4   | 1.9   | 46.5            |           |
| NE      | .1  | .0  | *   | .2  | .7   | .6   | .2   | .3   | .7   | 31.1  |                 |           |
| E       | .0  | .0  | .0  | .0  | .1   | .2   | .1   | .1   | .1   | .2    | 4.3             |           |
| SE      | .0  | .0  | .0  | *   | .1   | *    | .0   | .0   | *    | *     | .5              |           |
| S       | .0  | .0  | .0  | *   | *    | *    | .0   | .0   | *    | *     | .4              |           |
| SW      | *   | .0  | .0  | .0  | .1   | *    | .0   | .0   | *    | *     | .3              |           |
| W       | *   | .0  | .0  | *   | .1   | .3   | .1   | *    | *    | .2    | 4.0             |           |
| NW      | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| VAR     | *   | .0  | *   | .0  | .1   | .1   | .1   | .0   | *    | *     | 1.5             |           |
| CALM    | 11  | 0   | 3   | 31  | 132  | 107  | 74   | 34   | 45   | 165   | 4832            | 5434      |
| TOT OBS | .2  | .0  | .1  | .6  | 2.4  | 2.0  | 1.4  | .6   | .8   | 3.0   | 88.9            | 100.0     |

TABLE 7

## CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      | VSBY (NM) |      |       |      | VSBY (NM) |      |      |      |
|----------------|-----------|------|------|------|-----------|------|-------|------|-----------|------|------|------|
|                | >10       | >5   | >2   | >1   | >1/2      | >1/4 | >50YD | >0   | >10       | >5   | >2   | >1   |
| >6500          | 3.3       | 3.8  | 3.9  | 3.9  | 3.9       | 3.9  | 3.9   | 3.9  | 3.9       | 3.9  | 3.9  | 3.9  |
| >5000          | 3.6       | 4.4  | 4.5  | 4.5  | 4.5       | 4.5  | 4.5   | 4.5  | 4.5       | 4.5  | 4.5  | 4.5  |
| >3500          | 4.6       | 5.7  | 5.8  | 5.8  | 5.8       | 5.8  | 5.8   | 5.8  | 5.8       | 5.8  | 5.8  | 5.8  |
| >2000          | 6.0       | 7.6  | 7.8  | 7.8  | 7.8       | 7.8  | 7.8   | 7.8  | 7.8       | 7.8  | 7.8  | 7.8  |
| >1000          | 7.7       | 9.8  | 10.2 | 10.2 | 10.2      | 10.2 | 10.2  | 10.2 | 10.2      | 10.2 | 10.2 | 10.2 |
| >600           | 8.1       | 10.4 | 10.7 | 10.7 | 10.7      | 10.7 | 10.7  | 10.7 | 10.7      | 10.7 | 10.7 | 10.7 |
| >300           | 8.1       | 10.4 | 10.8 | 10.8 | 10.8      | 10.8 | 10.8  | 10.8 | 10.8      | 10.8 | 10.8 | 10.8 |
| >150           | 8.1       | 10.4 | 10.8 | 10.8 | 10.8      | 10.8 | 10.8  | 10.8 | 10.8      | 10.8 | 10.8 | 10.8 |
| >0             | 8.2       | 10.5 | 11.0 | 11.0 | 11.0      | 11.0 | 11.0  | 11.0 | 11.0      | 11.0 | 11.0 | 11.0 |
| TOTAL          | 454       | 583  | 606  | 606  | 606       | 608  | 610   | 610  | 610       | 610  | 610  | 610  |

TOTAL NUMBER OF OBS: 5528

PCT FREQ NH <5/8: 89.0

TABLE 7A

## PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | DBSCD | TOTAL OBS |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
|  | 65.9 | 8.0 | 6.2 | 4.3 | 3.4 | 2.4 | 2.7 | 2.4 | 4.6 | .2    | 5771      |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0008 DAKAR  
14.8N 17.8W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | .1    |              |
|              | TOT %  | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .7   | .6   | .1  | *  | .0 | .0 | .0 | *   | .0  | .0   | 1.4   |              |
|              | TOT %  | .7   | .6   | .1  | *  | .0 | .0 | .0 | *   | .0  | .0   | 1.4   |              |
| 1<2          | PCP    | .0   | *    | *   | .0 | .0 | *  | *  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .3   | .3   | .3  | .0 | .0 | *  | *  | .1  | .0  | *    | 1.1   |              |
|              | TOT %  | .3   | .3   | .4  | .0 | .0 | *  | *  | .1  | .0  | *    | 1.1   |              |
| 2<5          | PCP    | .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | NO PCP | .7   | .8   | .4  | *  | *  | *  | .1 | .1  | .0  | *    | 2.1   |              |
|              | TOT %  | .7   | .8   | .4  | *  | *  | *  | .1 | .1  | .0  | *    | 2.1   |              |
| 5<10         | PCP    | .1   | .1   | .1  | *  | .0 | *  | *  | .0  | .0  | *    | .3    |              |
|              | NO PCP | 8.3  | 8.2  | 1.7 | .3 | .1 | .2 | .4 | .9  | .0  | .4   | 20.4  |              |
|              | TOT %  | 8.3  | 8.3  | 1.7 | .3 | .1 | .2 | .4 | .9  | .0  | .4   | 20.7  |              |
| 10+          | PCP    | *    | *    | .0  | .0 | .0 | *  | *  | .0  | .0  | .0   | .1    |              |
|              | NO PCP | 39.6 | 25.4 | 3.3 | .4 | .4 | .3 | .3 | 3.5 | .0  | 1.3  | 74.4  |              |
|              | TOT %  | 39.6 | 25.5 | 3.3 | .4 | .4 | .3 | .3 | 3.5 | .0  | 1.3  | 74.5  |              |
| TOT OBS      |        | 6917 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |        | 49.7 | 35.6 | 5.8 | .7 | .5 | .5 | .8 | 4.7 | .0  | 1.8  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | *     |              |
|              | 4-10       | .0   | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | *     |              |
|              | 11-21      | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .0  | .0 | .0 | .0 | .0 | *   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | *    | *    | *   | *  | .0 | .0 | .0 | *   | .0  | .0   | .1    |              |
|              | 4-10       | .2   | .2   | *   | *  | .0 | .0 | .0 | *   | .0  | .0   | .4    |              |
|              | 11-21      | .3   | .3   | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   | .6    |              |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | TOT %      | .6   | .5   | .1  | *  | .0 | .0 | .0 | *   | .0  | .0   | 1.1   |              |
| 1<2          | 0-3        | *    | *    | *   | .0 | .0 | *  | *  | *   | .0  | *    | .1    |              |
|              | 4-10       | .1   | .2   | .1  | .0 | .0 | *  | *  | .1  | .0  | .0   | .6    |              |
|              | 11-21      | .1   | .2   | .1  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .5    |              |
|              | 22+        | *    | .1   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .3   | .6   | .3  | .0 | .0 | *  | *  | .1  | .0  | *    | 1.3   |              |
| 2<5          | 0-3        | .1   | *    | *   | *  | .0 | .0 | *  | *   | .0  | .1   | .3    |              |
|              | 4-10       | .3   | .4   | .2  | *  | *  | *  | *  | .1  | .0  | .0   | 1.1   |              |
|              | 11-21      | .4   | .6   | .3  | .0 | .0 | *  | *  | *   | .0  | .0   | 1.4   |              |
|              | 22+        | .1   | .3   | .1  | *  | .0 | .0 | *  | .0  | .0  | .0   | .5    |              |
|              | TOT %      | .9   | 1.4  | .6  | .1 | *  | *  | .1 | .1  | .0  | .1   | 3.3   |              |
| 5<10         | 0-3        | .3   | .2   | .1  | *  | *  | *  | *  | .1  | .0  | .4   | 1.3   |              |
|              | 4-10       | 4.1  | 3.8  | .9  | .2 | .1 | .1 | .2 | .6  | .0  | .0   | 9.9   |              |
|              | 11-21      | 3.6  | 4.3  | .7  | *  | .0 | *  | .1 | .2  | .0  | .0   | 9.0   |              |
|              | 22+        | .4   | .7   | .2  | *  | .0 | *  | .0 | *   | .0  | .0   | 1.4   |              |
|              | TOT %      | 8.4  | 9.1  | 1.9 | .2 | .1 | .2 | .3 | .9  | .0  | .4   | 21.6  |              |
| 10+          | 0-3        | 1.0  | .6   | .2  | *  | .1 | .1 | .1 | .2  | .0  | 1.2  | 3.6   |              |
|              | 4-10       | 15.6 | 10.1 | 1.9 | .3 | .2 | .1 | .2 | 2.1 | .0  | .0   | 30.5  |              |
|              | 11-21      | 18.5 | 14.4 | 1.7 | .1 | .1 | *  | *  | .8  | .0  | .0   | 35.7  |              |
|              | 22+        | 1.1  | 1.5  | .2  | *  | .0 | *  | *  | *   | .0  | .0   | 2.8   |              |
|              | TOT %      | 36.1 | 26.6 | 4.0 | .4 | .4 | .3 | .3 | 3.2 | .0  | 1.2  | 72.6  |              |
| TOT OBS      |            | 9409 |      |     |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            | 46.3 | 38.2 | 6.8 | .7 | .5 | .5 | .7 | 4.4 | .0  | 1.8  | 100.0 |              |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

JANUARY

AREA 0008 DAKAR  
14.8N 17.8W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003          | .4         | .0         | .0         | .6         | 2.3          | 1.2          | 1.5          | .6           | .4           | 3.0   | 9.8   | 90.2                | 1420         |
| 06009          | .2         | .0         | .2         | .8         | 2.2          | 2.2          | 1.1          | .4           | .6           | 3.0   | 10.7  | 89.3                | 1414         |
| 12015          | .2         | .0         | .1         | .3         | 2.1          | 2.1          | 1.7          | .6           | 1.3          | 2.6   | 10.9  | 89.1                | 1508         |
| 18021          | .1         | .0         | .0         | .5         | 2.8          | 2.3          | 1.0          | .8           | 1.0          | 3.6   | 12.0  | 88.0                | 1346         |
| TOT            | 12         | 0          | 4          | 31         | 193          | 110          | 76           | 34           | 46           | 172   | 618   | 5070                | 5588         |
| PCT            | .2         | .0         | .1         | .5         | 2.3          | 1.9          | 1.3          | .6           | .8           | 3.0   | 10.9  | 89.1                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .8    | .8  | 2.6 | 19.8 | 75.8 | 2165         |
| 06009          | .2   | 1.0   | 1.3 | 3.2 | 23.4 | 70.4 | 2627         |
| 12015          | .1   | .8    | 1.2 | 2.9 | 19.6 | 75.2 | 2241         |
| 18021          | *    | 1.5   | 2.0 | 4.1 | 23.2 | 69.2 | 2542         |
| TOT            | 12   | 114   | 128 | 309 | 2075 | 6937 | 9575         |
| PCT            | .1   | 1.2   | 1.3 | 3.2 | 21.7 | 72.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8), BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|--------------|------------|-------------|-----------------|--------------------|--------------|
| 00003          | .4           | .4         | 3.2         | 8.4             | 88.4               | 1370         |
| 06009          | .2           | .6         | 3.2         | 9.2             | 87.6               | 1369         |
| 12015          | .2           | .3         | 2.4         | 10.3            | 87.3               | 1474         |
| 18021          | .1           | .2         | 3.2         | 11.4            | 85.4               | 1315         |
| TOT            | 12           | 20         | 165         | 543             | 4820               | 5528         |
| PCT            | .2           | .4         | 3.0         | 9.8             | 87.2               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | *     | .0    | .0    | .0    | .0    | .0    | .0     | 1            | *           |
| 85/89  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 2            | *           |
| 80/84  | .0   | .0    | .1    | .1    | .2    | .1    | .0    | *      | 30           | .5          |
| 75/79  | .0   | *     | .2    | 1.2   | 2.3   | 3.0   | 1.7   | .5     | 500          | 9.0         |
| 70/74  | .0   | .7    | 3.5   | 9.5   | 14.2  | 12.6  | 4.6   | 2518   | 45.1         |             |
| 65/69  | .0   | *     | .8    | 3.9   | 7.2   | 11.1  | 12.6  | 5.5    | 2292         | 41.1        |
| 60/64  | .0   | .0    | .1    | .3    | .8    | .9    | 1.4   | .8     | 238          | 4.3         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | *     | .0    | .0     | 2            | *           |
| TOTAL  | 0    | 4     | 97    | 501   | 1123  | 1644  | 1575  | 639    | 5583         | 100.0       |
| PCT    | .0   | .1    | 1.7   | 9.0   | 20.1  | 29.4  | 28.2  | 11.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| .0   | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| .0   | *    | *   | .0 | .0 | .0 | .0 | .0  | .0  | *    |
| .2   | .2   | .1  | *  | .0 | .0 | .0 | .1  | .0  | .1   |
| 3.9  | 3.1  | .5  | .2 | .1 | *  | .1 | .7  | .0  | .3   |
| 22.4 | 15.0 | 2.9 | .3 | .3 | .4 | .5 | 2.2 | .0  | .9   |
| 21.4 | 15.0 | 2.1 | .3 | .2 | .1 | .2 | 1.5 | .0  | .3   |
| 2.2  | 1.6  | .2  | *  | .0 | .0 | .0 | .1  | .0  | .1   |
| *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 50.2 | 35.0 | 5.8 | .8 | .5 | .6 | .9 | 4.6 | .0  | 1.7  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 85  | 77  | 75  | 69  | 64 | 62 | 60  | 69.4 | 2673         |
| 06009          | 90  | 77  | 74  | 69  | 64 | 62 | 56  | 69.2 | 3578         |
| 12015          | 88  | 82  | 78  | 71  | 65 | 63 | 55  | 71.6 | 2672         |
| 18021          | 87  | 81  | 77  | 71  | 65 | 64 | 57  | 71.1 | 3469         |
| TOT            | 90  | 80  | 76  | 70  | 65 | 63 | 55  | 70.3 | 12392        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | 2.8   | 12.4  | 29.3  | 37.0  | 18.5   | 80   | 1414         |
| 06009          | .0   | 9.8   | 17.0  | 24.7  | 33.5  | 15.1   | 77   | 1452         |
| 12015          | .0   | 22.1  | 27.1  | 28.1  | 16.7  | 6.0    | 70   | 1459         |
| 18021          | .0   | 7.5   | 23.0  | 35.0  | 26.8  | 7.7    | 75   | 1381         |
| TOT            | 0    | 608   | 1135  | 1667  | 1622  | 674    | 75   | 5706         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | 2     | .0       | *         |
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *        | 7     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | *        | .1       | .1       | .1       | *        | .0       | 24    | *        | .3        |
| 9/10               | .0       | .0       | *        | .1       | .2       | .3       | *        | .0       | .0       | 43    | *        | .7        |
| 7/8                | .0       | *        | .1       | .3       | .5       | .5       | .1       | *        | .0       | 97    | *        | 1.5       |
| 6                  | .0       | .0       | .2       | .4       | .5       | .3       | *        | .0       | .0       | 82    | .1       | 1.2       |
| 5                  | .0       | *        | .5       | 1.2      | 1.3      | .3       | .1       | .0       | .0       | 213   | .1       | 3.3       |
| 4                  | .0       | .1       | 1.0      | 2.4      | 1.3      | .2       | *        | .0       | .0       | 320   | .1       | 5.0       |
| 3                  | .0       | .2       | 1.6      | 3.2      | 2.4      | .4       | .0       | .0       | .0       | 486   | .2       | 7.5       |
| 2                  | *        | .4       | 3.5      | 5.8      | 3.3      | .4       | *        | .0       | .0       | 841   | .4       | 13.0      |
| 1                  | *        | .8       | 5.5      | 7.2      | 3.4      | .2       | *        | .0       | .0       | 1076  | .5       | 16.6      |
| 0                  | .0       | .7       | 6.3      | 8.0      | 3.0      | .3       | *        | .0       | .0       | 1152  | .6       | 17.7      |
| -1                 | *        | .4       | 4.7      | 5.2      | 1.7      | .3       | *        | .0       | .0       | 770   | .4       | 11.9      |
| -2                 | .0       | .5       | 3.0      | 3.5      | 1.1      | .1       | .0       | .0       | .0       | 517   | .3       | 8.0       |
| -3                 | *        | .3       | 1.7      | 1.5      | .0       | .1       | .0       | .0       | .0       | 265   | .1       | 4.1       |
| -4                 | .0       | .4       | 1.1      | .9       | .3       | .1       | .0       | .0       | .0       | 176   | *        | 2.8       |
| -5                 | .0       | .2       | .6       | .5       | .3       | .1       | .0       | .0       | .0       | 105   | *        | 1.7       |
| -6                 | .0       | *        | .3       | .4       | .1       | .0       | .0       | .0       | .0       | 49    | .0       | .8        |
| -7/-8              | *        | .1       | .2       | .2       | .1       | .0       | .0       | .0       | .0       | 41    | *        | .6        |
| -9/-10             | .0       | *        | *        | *        | *        | .0       | .0       | .0       | .0       | 9     | .0       | .1        |
| -11/-13            | *        | *        | *        | .1       | .0       | .0       | .0       | .0       | .0       | 12    | .0       | .2        |
| -14/-16            | .0       | .0       | .0       | *        | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 9        |          | 1913     |          | 1259     |          | 38       |          | 1        | 6288  | 176      | 6112      |
| PCT                | .1       | 4.2      | 30.4     | 41.0     | 20.0     | 3.6      | .6       | .1       | *        | 100.0 | 2.8      | 97.2      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | 2.8  | .5    | .0    | .0    | .0  | 3.8  | .3  | 1.6  | .3    | .0    | .0    | .0  | 2.2  |
| 1-2     | .4  | 11.5 | 5.7   | .0    | .0    | .0  | 17.6 | .3  | 6.8  | 2.9   | .0    | .0    | .0  | 10.1 |
| 3-4     | *   | 6.2  | 12.6  | .2    | .0    | .0  | 19.1 | .0  | 3.2  | 7.4   | .4    | .0    | .0  | 11.1 |
| 5-6     | *   | 1.1  | 7.5   | .5    | .0    | .0  | 9.1  | .0  | .5   | 4.7   | .6    | .0    | .0  | 5.8  |
| 7       | .0  | .1   | 2.6   | .8    | .0    | .0  | 3.4  | .0  | .1   | 1.8   | .7    | .0    | .0  | 2.6  |
| 8-9     | .0  | .1   | .5    | .3    | .0    | .0  | .8   | .0  | *    | .3    | .5    | .0    | .0  | .8   |
| 10-11   | .0  | .0   | .2    | .2    | .0    | .0  | .4   | .0  | .0   | .1    | .1    | .0    | .0  | .2   |
| 12      | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0   | *     | .2    | *     | .0  | .2   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *     | .0    | *     | .0  | *    |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.1 | 21.6 | 29.6  | 2.1   | .0    | .0  | 54.4 | .6  | 12.2 | 17.7  | 2.5   | .1    | .0  | 33.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .1   | *     | .0    | .0    | .0  | .2  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | *   | 1.2  | .4    | .0    | .0    | .0  | 1.5 | .0  | .2   | .1    | .0    | .0    | .0  | .3  |
| 3-4     | .0  | .7   | .8    | .1    | .0    | .0  | 1.5 | .0  | .1   | *     | *     | .0    | .0  | .1  |
| 5-6     | .0  | .1   | .3    | .2    | .0    | .0  | .7  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .1   | .3    | .2    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .1    | .0    | *     | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | 2.1  | 2.0   | .4    | .1    | .0  | 4.7 | .0  | .4   | .1    | *     | .0    | .0  | .5  |



PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | *   | .0   | .0    | .0    | .0    | .0  | *   | .1  | .0   | *     | .0    | .0    | .0  | .1  |
| 1-2     | *   | .1   | *     | .0    | .0    | .0  | .2  | *   | .0   | .0    | .0    | .0    | .0  | *   |
| 3-4     | *   | .1   | .1    | .0    | .0    | .0  | .2  | .0  | *    | *     | .0    | .0    | .0  | *   |
| 5-6     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .2   | .1    | .0    | .0    | .0  | .4  | .1  | *    | .1    | .0    | .0    | .0  | .2  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | *   | .1   | .0    | .0    | .0    | .0  | .1  | .1  | .2   | .0    | .0    | .0    | .0  | .7  |           |
| 1-2     | *   | .2   | .0    | .0    | .0    | .0  | .2  | .1  | 1.4  | .4    | .0    | .0    | .0  | 1.9 |           |
| 3-4     | .0  | *    | .0    | .0    | .0    | .0  | *   | *   | .6   | .6    | *     | .0    | .0  | 1.2 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .2    | .0    | .0    | .0  | .2  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .1    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | *     | .0    | .0  | *   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .1  | .3   | .0    | .0    | .0    | .0  | .3  | .2  | 2.6  | 1.3   | .1    | .0    | .0  | 4.2 | 97.8      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.2 | 5.0  | .8    | .0    | .0    | .0  | 10.0  |         |
| 1-2     | 1.1 | 21.2 | 9.4   | .0    | .0    | .0  | 31.8  |         |
| 3-4     | .1  | 10.8 | 21.2  | .7    | .0    | .0  | 32.9  |         |
| 5-6     | *   | 1.6  | 12.8  | 1.2   | .0    | .0  | 15.6  |         |
| 7       | .0  | .3   | 4.8   | 1.6   | .0    | .0  | 6.6   |         |
| 8-9     | .0  | .1   | .8    | .8    | *     | .0  | 1.8   |         |
| 10-11   | .0  | .0   | .3    | .3    | .0    | .0  | .6    |         |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .1    | .2    | .1    | .0  | .3    |         |
| 17-19   | .0  | .0   | *     | .0    | *     | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *     |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.5 | 39.0 | 50.2  | 5.1   | .1    | .0  | 100.0 | 3473    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.2 | 10.3 | 13.3 | 5.9  | 3.1  | .9  | .4    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1620  | 3        |
| 6-7          | *   | 1.5  | 5.5  | 5.9  | 4.3  | 1.5 | .8    | .2  | .3    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 897   | 5        |
| 8-9          | *   | .6   | 2.0  | 3.4  | 3.3  | 2.0 | 1.0   | .3  | .5    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 588   | 6        |
| 10-11        | .0  | .9   | .8   | 1.0  | 1.3  | .7  | .8    | .1  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 261   | 6        |
| 12-13        | .0  | .0   | 1.2  | .9   | .5   | .6  | .3    | .1  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 161   | 6        |
| >13          | .0  | .0   | .0   | .4   | .5   | .2  | .3    | .1  | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 74    | 8        |
| INDET        | 3.1 | 5.6  | 5.3  | 2.5  | 1.9  | .4  | .2    | .1  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 859   | 3        |
| TOTAL        | 240 | 844  | 1252 | 890  | 671  | 283 | 164   | 46  | 61    | 7     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4400  | 4        |
| PCT          | 3.4 | 18.9 | 28.1 | 20.0 | 15.0 | 6.3 | 3.7   | 1.0 | 1.4   | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

FEBRUARY

AREA 0008 DAKAR  
14.8N 17.8W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |             |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|-------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG PCPN | FOG WD PCPN | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .5                 | .1        | .1   | .0        | .0   | .0              | .0   | .8                      | .3             | .7        | 3.6      | .0          | 5.7        | 1.5             | 87.4       |
| NE       | .8                 | .1        | .6   | .0        | .0   | .0              | .0   | 1.2                     | .3             | .7        | 3.7      | .0          | 5.3        | 1.9             | 80.8       |
| E        | .5                 | .5        | .0   | .0        | .0   | .0              | .0   | 1.1                     | .0             | 1.1       | 6.9      | .0          | 6.3        | .5              | 84.1       |
| SE       | 3.8                | 7.7       | 1.0  | .0        | .0   | .0              | .0   | 12.5                    | .0             | .0        | .0       | .0          | .0         | 3.8             | 83.7       |
| S        | 6.1                | 6.1       | 2.3  | .0        | .0   | .0              | .0   | 14.4                    | .0             | 3.0       | 3.0      | .0          | 2.3        | .0              | 80.3       |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | 4.8            | .0        | 1.2      | .0          | 8.4        | 14.5            | 71.1       |
| W        | 1.0                | .0        | .0   | .0        | .0   | .0              | .0   | 1.0                     | .0             | 2.0       | 7.0      | .0          | 10.9       | 2.0             | 77.1       |
| NW       | .2                 | .0        | .5   | .0        | .0   | .0              | .0   | .7                      | .6             | .6        | 6.5      | .1          | 9.1        | 2.1             | 80.3       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0          | .0         | .0              | .0         |
| CALM     | .0                 | .9        | .0   | .0        | .0   | .0              | .0   | .9                      | .0             | .0        | 9.2      | .0          | 11.0       | 1.8             | 77.1       |
| TOT PCT  | .6                 | .2        | .3   | .0        | .0   | .0              | .0   | 1.0                     | .3             | .7        | 4.1      | *           | 6.1        | 1.7             | 86.1       |
| TOT OBS: | 6923               |           |      |           |      |                 |      |                         |                |           |          |             |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |             |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|-------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG PCPN | FOG WD PCPN | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .8                 | .2        | .2   | .0        | .0   | .0              | .0   | 1.1                     | .5             | 1.0       | 3.0      | .0          | 4.2        | 1.7             | 88.4       |
| 06009      | .5                 | .5        | .5   | .0        | .0   | .0              | .0   | 1.5                     | .2             | 1.5       | 4.9      | .0          | 5.4        | 1.7             | 84.8       |
| 12015      | .5                 | .1        | .1   | .0        | .0   | .0              | .0   | .7                      | .4             | .0        | 3.5      | .0          | 7.5        | 2.2             | 85.7       |
| 18021      | .5                 | .1        | .2   | .0        | .0   | .0              | .0   | .7                      | .1             | .4        | 5.3      | .1          | 7.2        | 1.8             | 84.5       |
| TOT PCT    | .6                 | .2        | .3   | .0        | .0   | .0              | .0   | 1.0                     | .3             | .7        | 4.2      | *           | 6.1        | 1.8             | 85.8       |
| TOT OBS:   | 7105               |           |      |           |      |                 |      |                         |                |           |          |             |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.5                | 23.7 | 28.1  | 2.0   | *     | .0  |       | 55.3      | 11.8     |          | 58.7       | 66.4  | 57.2  | 49.6  | 51.1  | 58.7  | 57.4  | 52.3  |
| NE       | .7                 | 11.9 | 13.9  | 1.7   | *     | .0  |       | 28.2      | 12.1     |          | 22.7       | 14.8  | 27.7  | 37.2  | 34.1  | 23.2  | 25.1  | 28.7  |
| E        | .3                 | 1.8  | 1.4   | .2    | .0    | .0  |       | 3.6       | 10.5     |          | 2.2        | 3.4   | 2.7   | 6.2   | 5.3   | 2.2   | 3.3   | 3.7   |
| SE       | .1                 | .3   | .1    | *     | .0    | .0  |       | .5        | 8.1      |          | .2         | .6    | .5    | .8    | .7    | 1.3   | .3    | .5    |
| S        | .1                 | .2   | .1    | .0    | *     | .0  |       | .4        | 6.5      |          | .6         | .5    | .4    | .3    | .5    | .4    | .2    | .4    |
| SW       | .1                 | .3   | *     | .0    | *     | .0  |       | .4        | 6.3      |          | .7         | .8    | .2    | .1    | .3    | .0    | .3    | 1.2   |
| W        | .3                 | .7   | .1    | .0    | .0    | .0  |       | 1.1       | 5.6      |          | 1.5        | .0    | .9    | .5    | .5    | .0    | 1.4   | 1.7   |
| NW       | .7                 | 5.5  | 2.5   | .2    | .0    | .0  |       | 8.9       | 9.0      |          | 11.4       | 10.9  | 8.6   | 3.9   | 6.2   | 12.9  | 10.8  | 10.1  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.5                |      |       |       |       |     |       | 1.5       | .0       |          | 1.8        | 2.5   | 1.8   | 1.3   | 1.4   | 1.2   | 1.2   | 1.3   |
| TOT OBS  | 631                | 5300 | 5507  | 483   | 5     | 0   | 11926 |           | 11.3     |          | 2342       | 160   | 2350  | 1065  | 2471  | 170   | 2308  | 1060  |
| TOT PCT  | 5.3                | 44.4 | 46.2  | 4.0   | *     | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     |       |  | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-------|--|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |       |  |           |          |          | 00         | 03    | 06    | 09    | 12 |
| N        | 9.0                | 35.3 | 10.8  | .2    | .0  |       |  | 55.3      | 11.8     |          | 59.2       | 54.8  | 51.6  | 55.8  |    |
| NE       | 4.1                | 17.7 | 6.2   | .2    | .0  |       |  | 28.2      | 12.1     |          | 22.2       | 30.7  | 33.4  | 26.2  |    |
| E        | 1.1                | 2.0  | .6    | .1    | .0  |       |  | 3.6       | 10.5     |          | 2.3        | 3.8   | 5.1   | 3.4   |    |
| SE       | .2                 | .2   | *     | .0    | .0  |       |  | .5        | 8.1      |          | .2         | .6    | .7    | .4    |    |
| S        | .3                 | .1   | *     | *     | .0  |       |  | .4        | 6.5      |          | .6         | .3    | .5    | .3    |    |
| SW       | .3                 | .2   | *     | *     | .0  |       |  | .4        | 6.3      |          | .7         | .2    | .3    | .6    |    |
| W        | .8                 | .3   | *     | .0    | .0  |       |  | 1.1       | 5.6      |          | 1.4        | .8    | .5    | 1.5   |    |
| NW       | 2.9                | 5.4  | .6    | *     | .0  |       |  | 8.9       | 9.0      |          | 11.4       | 7.2   | 6.6   | 10.6  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |       |  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 1.5                |      |       |       |     |       |  | 1.5       | .0       |          | 1.9        | 1.6   | 1.4   | 1.2   |    |
| TOT OBS  | 2404               | 7294 | 2165  | 63    | 0   | 11926 |  |           | 11.3     |          | 2502       | 3415  | 2641  | 3368  |    |
| TOT PCT  | 20.2               | 61.2 | 18.2  | .5    | .0  |       |  | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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14.8N 17.8W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 1.9  | 4.2 | 45.2 | 45.1               | 3.6   | *     | .0  | 11.0  | 100.0    | 2502      |
| 06009 | 1.6  | 3.8 | 44.3 | 46.0               | 4.2   | .1    | .0  | 11.3  | 100.0    | 3415      |
| 12015 | 1.4  | 3.4 | 42.7 | 47.6               | 4.8   | .1    | .0  | 11.6  | 100.0    | 2641      |
| 18021 | 1.2  | 3.7 | 45.4 | 46.1               | 3.7   | .0    | .0  | 11.1  | 100.0    | 3368      |
| TOT   | 181  | 450 | 5300 | 5507               | 483   | 5     | 0   | 11.3  |          | 11926     |
| PCT   | 1.5  | 3.8 | 44.4 | 46.2               | 4.0   | *     | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 42.8 | 7.0  | 7.5  | 4.9          |              | 2.0                    |
| NE       | 13.4 | 2.8  | 3.5  | 1.6          |              | 2.3                    |
| E        | 1.4  | .4   | .5   | .2           |              | 2.7                    |
| SE       | .2   | *    | * .1 |              |              | 3.4                    |
| S        | .3   | *    | .1   | .0           |              | 1.7                    |
| SW       | .2   | *    | *    | .1           |              | 2.5                    |
| W        | .5   | .1   | .1   | .1           |              | 2.2                    |
| NW       | 7.0  | 1.0  | 1.4  | .9           |              | 2.0                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.2  | .2   | .2   | .3           |              | 2.4                    |
| TOT OBS  | 3640 | 626  | 720  | 449          | 5435         | 2.1                    |
| TOT PCT  | 67.0 | 11.5 | 13.2 | 8.3          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| BY WIND DIRECTION |      |      |      |              |              |                        | AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION |            |            |            |              |              |              |              |              |                  |                         |  |
|-------------------|------|------|------|--------------|--------------|------------------------|---|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------------------|--|
| WIND DIR          | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER | 000<br>149                                  | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+<br>ANY HGT | NH <5/8<br>TOTAL<br>OBS |  |
| N                 | 42.8 | 7.0  | 7.5  | 4.9          |              | 2.0                    | .2  | .0         | .1         | .5         | 1.5          | 1.2          | .8           | .4           | .5           | 1.8              | 55.1                    |  |
| NE                | 13.4 | 2.8  | 3.5  | 1.6          |              | 2.3                    | * .0  | .1         | .2         | .4         | .8           | .5           | .1           | .1           | .2           | 18.9             |                         |  |
| E                 | 1.4  | .4   | .5   | .2           |              | 2.7                    | .0  | *          | *          | .1         | .1           | .1           | *            | .0           | .1           | .1               | 2.1                     |  |
| SE                | .2   | *    | * .1 |              |              | 3.4                    | .0  | .0         | .0         | *          | *            | *            | *            | .0           | *            | *                | .2                      |  |
| S                 | .3   | *    | .1   | .0           |              | 1.7                    | .0  | .0         | .0         | .0         | .0           | *            | *            | *            | .0           | .0               | .3                      |  |
| SW                | .2   | *    | *    | .1           |              | 2.5                    | .0  | .0         | .0         | .0         | *            | *            | *            | .0           | .0           | *                | .3                      |  |
| W                 | .5   | .1   | .1   | .1           |              | 2.2                    | .0  | .0         | .0         | .0         | .0           | *            | *            | .0           | .0           | *                | .6                      |  |
| NW                | 7.0  | 1.0  | 1.4  | .9           |              | 2.0                    | .1  | .0         | .0         | .1         | .3           | .3           | *            | .1           | *            | .4               | 9.0                     |  |
| VAR               | .0   | .0   | .0   | .0           |              | .0                     | .0  | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0               | .0                      |  |
| CALM              | 1.2  | .2   | .2   | .3           |              | 2.4                    | .1  | .0         | *          | .0         | .1           | .1           | *            | *            | .0           | *                | 1.5                     |  |
| TOT OBS           | 3640 | 626  | 720  | 449          | 5435         | 2.1                    | 20  | 1          | 11         | 46         | 138          | 136          | 83           | 33           | 40           | 141              | 4786                    |  |
| TOT PCT           | 67.0 | 11.5 | 13.2 | 8.3          | 100.0        |                        | .4  | *          | .2         | .8         | 2.5          | 2.5          | 1.5          | .6           | .7           | 2.6              | 88.1                    |  |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 1.8       | 2.8  | 3.4  | 3.5  | 3.5  | 3.5  | 3.5   | 3.5  |
| >5000             | 2.2       | 3.4  | 4.0  | 4.1  | 4.1  | 4.1  | 4.1   | 4.1  |
| >3500             | 3.2       | 4.8  | 5.5  | 5.6  | 5.6  | 5.6  | 5.6   | 5.6  |
| >2000             | 4.9       | 7.2  | 8.1  | 8.1  | 8.1  | 8.1  | 8.1   | 8.1  |
| >1000             | 6.3       | 9.4  | 10.6 | 10.7 | 10.7 | 10.7 | 10.7  | 10.7 |
| >600              | 6.6       | 10.2 | 11.4 | 11.6 | 11.6 | 11.6 | 11.6  | 11.6 |
| >300              | 6.7       | 10.3 | 11.6 | 11.8 | 11.8 | 11.8 | 11.8  | 11.8 |
| >150              | 6.7       | 10.4 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8  | 11.8 |
| >0                | 6.7       | 10.5 | 11.9 | 12.1 | 12.1 | 12.1 | 12.1  | 12.1 |
| TOTAL             | 373       | 580  | 661  | 670  | 670  | 671  | 672   | 672  |

TOTAL NUMBER OF OBS: 5536

PCT FREQ NH <5/8: 87.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 8 OBSCD | TOTAL<br>OBS |
|------|-----|-----|-----|-----|-----|-----|-----|-----|---------|--------------|
| 65.2 | 8.9 | 5.6 | 3.9 | 3.1 | 1.9 | 2.9 | 2.6 | 5.4 | .3      | 5759         |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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AREA 0008 DAKAR  
14.8N 17.8W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W  | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .0   | .0  | .0 | .0 | .0 | *  | *    | .0  | .0   | .1    |              |
|              | TOT %  | .1   | .0   | .0  | .0 | .0 | .0 | *  | *    | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0   | .0  | .0   | .0    |              |
|              | NO PCP | 1.2  | .7   | .2  | .0 | *  | .0 | *  | .2   | .0  | .0   | 2.3   |              |
|              | TOT %  | 1.2  | .7   | .2  | .0 | *  | .0 | *  | .2   | .0  | .0   | 2.3   |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .8   | .4   | .1  | .0 | .0 | .0 | *  | .2   | .0  | .1   | 1.5   |              |
|              | TOT %  | .8   | .4   | .1  | .0 | .0 | .0 | *  | .2   | .0  | .1   | 1.5   |              |
| 2<5          | PCP    | .1   | *    | .0  | *  | .0 | .0 | .0 | *    | .0  | *    | .1    |              |
|              | NO PCP | 2.3  | .8   | .2  | *  | *  | *  | .1 | 1.0  | .0  | .2   | 4.6   |              |
|              | TOT %  | 2.3  | .8   | .2  | *  | *  | *  | .1 | 1.0  | .0  | .2   | 4.7   |              |
| 5<10         | PCP    | .3   | .1   | *   | *  | .1 | .0 | *  | .1   | .0  | .0   | .6    |              |
|              | NO PCP | 14.2 | 6.4  | .5  | .1 | .1 | .1 | .2 | 2.8  | .0  | .4   | 24.7  |              |
|              | TOT %  | 14.5 | 6.6  | .6  | .1 | .1 | .1 | .2 | 2.9  | .0  | .4   | 25.3  |              |
| 10+          | PCP    | .1   | .1   | .0  | .0 | *  | .0 | .0 | .0   | .0  | .0   | .2    |              |
|              | NO PCP | 41.9 | 14.2 | 1.7 | .2 | .3 | .2 | .4 | 5.8  | .0  | .9   | 65.8  |              |
|              | TOT %  | 42.0 | 14.4 | 1.7 | .2 | .3 | .2 | .4 | 5.8  | .0  | .9   | 66.0  |              |
| TOT OBS      |        |      |      |     |    |    |    |    |      |     |      |       | 6915         |
| TOT PCT      |        | 60.9 | 22.8 | 2.7 | .4 | .5 | .3 | .7 | 10.1 | .0  | 1.6  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 11-21      | *    | .0   | .0  | .0 | .0 | .0 | *  | .0  | .0  | .0   | *     |              |
|              | 22+        | *    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | TOT %      | .1   | *    | .0  | .0 | .0 | .0 | *  | *   | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | *    | *   | .0 | *  | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | 4-10       | .5   | .2   | *   | .0 | .0 | .0 | *  | .1  | .0  | .0   | .9    |              |
|              | 11-21      | .4   | .3   | .1  | .0 | .0 | .0 | .0 | *   | .0  | .0   | .8    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .9   | .6   | .1  | .0 | *  | .0 | *  | .1  | .0  | .0   | 1.8   |              |
| 1<2          | 0-3        | .1   | .0   | .0  | .0 | .0 | .0 | .0 | *   | .0  | .1   | .2    |              |
|              | 4-10       | .3   | .2   | .0  | .0 | *  | *  | *  | .1  | .0  | .0   | .6    |              |
|              | 11-21      | .3   | .1   | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   | .5    |              |
|              | 22+        | .1   | *    | *   | .0 | .0 | .0 | .0 | *   | .0  | .0   | .1    |              |
|              | TOT %      | .7   | .4   | .1  | .0 | *  | *  | *  | .2  | .0  | .1   | 1.4   |              |
| 2<5          | 0-3        | .1   | *    | *   | .0 | *  | *  | *  | .1  | .0  | .2   | .5    |              |
|              | 4-10       | 1.1  | .5   | .1  | *  | *  | *  | .1 | .5  | .0  | .0   | 2.5   |              |
|              | 11-21      | .8   | .5   | .1  | *  | *  | *  | *  | .2  | .0  | .0   | 1.6   |              |
|              | 22+        | .2   | .1   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | .3    |              |
|              | TOT %      | 2.2  | 1.1  | .3  | *  | .1 | .0 | .1 | .9  | .0  | .2   | 4.9   |              |
| 5<10         | 0-3        | .4   | .2   | .1  | *  | *  | *  | .1 | .2  | .0  | .4   | 1.5   |              |
|              | 4-10       | 6.4  | 2.8  | .4  | *  | *  | *  | .2 | 1.6 | .0  | .0   | 11.6  |              |
|              | 11-21      | 6.2  | 3.0  | .2  | *  | *  | *  | *  | .8  | .0  | .0   | 10.3  |              |
|              | 22+        | .5   | .4   | *   | .0 | .0 | .0 | .0 | .1  | .0  | .0   | 1.0   |              |
|              | TOT %      | 13.4 | 6.5  | .8  | .1 | .1 | .1 | .3 | 2.8 | .0  | .4   | 24.4  |              |
| 10+          | 0-3        | .9   | .3   | .2  | *  | .1 | .1 | .1 | .4  | .0  | 1.0  | 3.1   |              |
|              | 4-10       | 16.6 | 6.7  | 1.0 | .2 | .1 | .2 | .3 | 3.7 | .0  | .0   | 28.9  |              |
|              | 11-21      | 22.0 | 8.4  | .7  | .1 | *  | *  | *  | 1.7 | .0  | .0   | 33.0  |              |
|              | 22+        | 1.3  | .9   | .1  | *  | *  | *  | .0 | .1  | .0  | .0   | 2.3   |              |
|              | TOT %      | 40.8 | 16.4 | 1.9 | .3 | .3 | .3 | .5 | 5.9 | .0  | 1.0  | 67.3  |              |
| TOT OBS      |            |      |      |     |    |    |    |    |     |     |      |       | 9182         |
| TOT PCT      |            | 58.1 | 24.9 | 3.2 | .4 | .5 | .4 | .9 | 9.9 | .0  | 1.7  | 100.0 |              |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HR    | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|-------|-----|-----|-----|-----|------|------|------|------|------|-------|-------|---------------------|--------------|
| (GMT) | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |       |                     |              |
| 00003 | .5  | .0  | .1  | .7  | 2.1  | 2.1  | 1.2  | .5   | .7   | 2.3   | 10.3  | 89.7                | 1363         |
| 06009 | .4  | .1  | .2  | 1.2 | 3.6  | 3.0  | 1.7  | .3   | .5   | 2.8   | 13.8  | 86.2                | 1385         |
| 12015 | .3  | .0  | .3  | .9  | 1.8  | 2.8  | 1.3  | .6   | .9   | 2.7   | 11.5  | 88.5                | 1557         |
| 18021 | .2  | .0  | .1  | .7  | 2.6  | 2.1  | 1.8  | .9   | .9   | 2.8   | 12.1  | 87.9                | 1375         |
| TOT   | 20  | 1   | 11  | 48  | 142  | 143  | 85   | 33   | 43   | 151   | 677   | 5003                | 5680         |
| PCT   | .4  | *   | .2  | .8  | 2.5  | 2.5  | 1.5  | .6   | .8   | 2.7   | 11.9  | 88.1                | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HR    | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL |
|-------|------|-------|-----|-----|------|------|-------|
| (GMT) |      |       |     |     |      |      | OBS   |
| 00003 | .1   | 1.0   | .9  | 5.1 | 23.7 | 69.1 | 2090  |
| 06009 | .0   | 2.4   | 1.3 | 4.8 | 25.2 | 66.3 | 2355  |
| 12015 | .1   | 1.4   | 1.6 | 5.3 | 22.0 | 69.5 | 2219  |
| 18021 | .1   | 2.4   | 1.9 | 5.4 | 26.1 | 64.1 | 2502  |
| TOT   | 9    | 175   | 135 | 482 | 2280 | 6285 | 9366  |
| PCT   | .1   | 1.9   | 1.4 | 5.1 | 24.3 | 67.1 | 100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HR    | <150 | <600 | <1000 | 1000+  | NH < 5/8 | TOTAL |
|-------|------|------|-------|--------|----------|-------|
| (GMT) | <500 | <1   | <5    | AND 5+ | AND 5+   | OBS   |
| 00003 | .5   | .8   | 6.3   | 7.4    | 86.3     | 1330  |
| 06009 | .4   | .7   | 6.6   | 10.9   | 82.4     | 1343  |
| 12015 | .3   | .7   | 6.7   | 9.2    | 84.1     | 1525  |
| 18021 | .2   | .7   | 7.5   | 10.2   | 82.3     | 1338  |
| TOT   | 20   | 39   | 376   | 521    | 4639     | 5536  |
| PCT   | .4   | .7   | 6.8   | 9.4    | 83.8     | 100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL | PCT   |
|--------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
|        |      |       |       |       |       |       |       |        | OBS   | FREQ  |
| 85/89  | .0   | .0    | .0    | .0    | .0    | .0    | *     | .0     | 1     | *     |
| 80/84  | .0   | .0    | .0    | .1    | .1    | .1    | .1    | .0     | 21    | .4    |
| 75/79  | .0   | .0    | .2    | .3    | 1.5   | 2.4   | 1.4   | .2     | 345   | 6.0   |
| 70/74  | .0   | .0    | .1    | 1.3   | 5.7   | 12.6  | 12.9  | 5.1    | 2175  | 37.7  |
| 65/69  | .0   | .0    | .1    | 1.1   | 3.4   | 11.5  | 23.5  | 10.8   | 2905  | 50.3  |
| 60/64  | .0   | .0    | *     | .1    | .2    | .8    | 2.3   | 2.4    | 323   | 5.6   |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | *      | 2     | *     |
| TOTAL  | 0    | 0     | 17    | 169   | 629   | 1575  | 2314  | 1068   | 5772  | 100.0 |
| PCT    | .0   | .0    | .3    | 2.9   | 10.9  | 27.3  | 40.1  | 18.5   |       |       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW   | VAR | CALM |
|------|------|-----|----|----|----|----|------|-----|------|
|      |      |     |    |    |    |    |      |     |      |
| *    | .0   | .0  | .0 | .0 | .0 | .0 | *    | .0  | .0   |
| .2   | .1   | *   | *  | .0 | .0 | .0 | .1   | .0  | *    |
| 3.2  | 1.6  | .2  | *  | .1 | *  | *  | .6   | .0  | .2   |
| 22.7 | 8.1  | 1.0 | .1 | .2 | .1 | .3 | 4.5  | .0  | .8   |
| 31.9 | 11.4 | 1.2 | .3 | .2 | .1 | .3 | 4.5  | .0  | .4   |
| 3.3  | 1.3  | .2  | .1 | *  | *  | *  | .6   | .0  | *    |
| *    | .0   | .0  | .0 | .0 | .0 | .0 | .0   | .0  | .0   |
| 61.3 | 22.4 | 2.6 | .4 | .4 | .3 | .7 | 10.3 | .0  | 1.5  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HR    | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL |
|-------|-----|-----|-----|-----|----|----|-----|------|-------|
| (GMT) |     |     |     |     |    |    |     |      | OBS   |
| 00003 | 85  | 75  | 73  | 68  | 64 | 62 | 57  | 68.0 | 2529  |
| 06009 | 85  | 75  | 73  | 68  | 64 | 62 | 55  | 67.8 | 3433  |
| 12015 | 86  | 81  | 77  | 71  | 66 | 64 | 57  | 70.9 | 2606  |
| 18021 | 87  | 81  | 76  | 70  | 65 | 63 | 58  | 70.1 | 3346  |
| TOT   | 87  | 79  | 75  | 69  | 64 | 62 | 55  | 69.2 | 11914 |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HR    | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL |
|-------|------|-------|-------|-------|-------|-------|-------|--------|------|-------|
| (GMT) |      |       |       |       |       |       |       |        |      | OBS   |
| 00003 | .0   | .6    | 5.6   | 21.7  | 43.5  | 28.7  | 84    | 1408   |      |       |
| 06009 | .0   | 2.5   | 6.4   | 20.7  | 42.9  | 27.6  | 83    | 1499   |      |       |
| 12015 | .0   | 7.2   | 18.9  | 33.9  | 31.5  | 8.5   | 76    | 1536   |      |       |
| 18021 | .0   | 2.1   | 12.0  | 32.5  | 42.7  | 10.7  | 79    | 1476   |      |       |
| TOT   | 0    | 186   | 642   | 1616  | 2369  | 1106  | 80    | 5919   |      |       |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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14.8N 17.8W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WQ<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | *        | *        | *        | .1       | .0       | 13    | *        | .2        |
| 11/13              | .0       | .0       | .0       | *        | .2       | .3       | .2       | *        | 51    | .1       | .7        |
| 9/10               | .0       | .0       | .0       | .1       | .2       | .3       | *        | .0       | 44    | .1       | .6        |
| 7/8                | .0       | .0       | .2       | .6       | 1.0      | .3       | *        | .0       | 133   | .2       | 1.9       |
| 6                  | .0       | .0       | .2       | 1.0      | 1.1      | .3       | *        | .0       | 165   | .1       | 2.5       |
| 5                  | *        | .0       | .5       | 2.0      | 1.8      | .3       | .0       | .0       | 289   | .2       | 4.4       |
| 4                  | .0       | .0       | 1.3      | 3.3      | 1.8      | .2       | *        | .0       | 423   | .3       | 6.4       |
| 3                  | .0       | .2       | 3.0      | 4.9      | 2.2      | .1       | .0       | .0       | 659   | .6       | 9.8       |
| 2                  | .0       | .4       | 4.9      | 6.6      | 1.9      | .2       | .0       | .0       | 884   | .7       | 13.3      |
| 1                  | .0       | .9       | 7.3      | 7.3      | 1.9      | .1       | .0       | .0       | 1098  | .9       | 16.5      |
| 0                  | *        | 1.1      | 7.2      | 5.9      | 1.3      | .1       | .0       | .0       | 995   | .6       | 15.2      |
| -1                 | .0       | .9       | 5.7      | 3.8      | .6       | *        | .0       | .0       | 693   | .4       | 10.5      |
| -2                 | *        | .7       | 2.9      | 2.2      | .5       | *        | .0       | .0       | 395   | .2       | 6.1       |
| -3                 | .0       | .3       | 1.6      | 1.4      | .2       | .0       | .0       | .0       | 217   | .1       | 3.4       |
| -4                 | *        | .2       | .8       | .8       | .2       | *        | .0       | .0       | 126   | *        | 1.9       |
| -5                 | .0       | .2       | .4       | .4       | .1       | .0       | .0       | .0       | 67    | *        | 1.0       |
| -6                 | *        | .1       | .1       | .1       | .0       | .0       | .0       | .0       | 26    | .0       | .4        |
| -7/-8              | .0       | .0       | .1       | .1       | .0       | .0       | .0       | .0       | 13    | .0       | .2        |
| -9/-10             | .0       | *        | .1       | *        | .0       | .0       | .0       | .0       | 10    | .0       | .1        |
| -11/-13            | *        | *        | *        | *        | .0       | .0       | .0       | .0       | 6     | .0       | .1        |
| -14/-16            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 8        |          | 2295     |          | 950      |          | 31       |          | 6308  | 290      | 6018      |
| PCT                | .1       | 5.1      | 36.4     | 40.5     | 15.1     | 2.3      | .5       | *        | 100.0 | 4.6      | 95.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .6  | 2.8  | .3    | .0    | .0    | .0  | 3.6  | .1  | 1.4  | .1    | .0    | .0    | .0  | 1.6  |
| 1-2     | .9  | 14.7 | 7.2   | .0    | .0    | .0  | 22.7 | .2  | 5.1  | 1.8   | .0    | .0    | .0  | 7.1  |
| 3-4     | .2  | 7.1  | 12.5  | .3    | .0    | .0  | 20.1 | *   | 1.7  | 3.4   | .2    | .0    | .0  | 5.3  |
| 5-6     | *   | 1.4  | 7.9   | .6    | .0    | .0  | 9.8  | *   | .5   | 2.5   | .3    | .0    | .0  | 3.4  |
| 7       | .0  | .1   | 3.8   | .6    | .0    | .0  | 4.6  | .0  | .0   | .9    | .1    | .0    | .0  | 1.0  |
| 8-9     | .0  | .1   | 1.0   | .2    | .0    | .0  | 1.3  | .0  | *    | .2    | .0    | .0    | .0  | .3   |
| 10-11   | .0  | .0   | .4    | .2    | .0    | .0  | .6   | .0  | .0   | .1    | .2    | .0    | .0  | .3   |
| 12      | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | *     | .0    | .0    | .0  | *    |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0   | *     | .0    | .0    | .0  | *    |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.6 | 26.2 | 33.1  | 2.1   | .0    | .0  | 63.0 | .3  | 8.8  | 9.0   | .8    | .0    | .0  | 19.0 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3  | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 1-2     | .3  | .8   | .2    | .0    | .0    | .0  | 1.2 | *   | .1   | .1    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .3   | .2    | .0    | .0    | .0  | .5  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .3    | *     | .0    | .0  | .3  | .0  | .0   | *     | .0    | .0    | *   | *   |
| 7       | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 1.3  | .8    | .1    | .0    | .0  | 2.5 | *   | .1   | .2    | *     | .0    | .0  | .4  |



PERIOD: (OVER-ALL) 1963-1973

FEBRUARY

AREA 0008 DAKAR

TABLE 16 (CONT)

14.8N 17.8W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .1  | .0   | .0    | .0    | .0    | .0  |  | .1  | .1  | .0   | .0    | .0    | .0    | .0  |  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  |  | .0  | .1  | .0   | .0    | .0    | .0    | .0  |  | .1  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .1  | .1   | .0    | .0    | .0    | .0  |  | .3  | .1  | .2   | .0    | .0    | .0    | .0  |  | .3  |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |           |
| <1      | .0  | .1   | .0    | .0    | .0    | .0  |  | .0  | .3  | 1.0  | .1    | .0    | .0    | .0  |  | .4   | 1.4       |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  |  | .0  | .2  | 4.0  | .8    | .0    | .0    | .0  |  | .4   | 4.9       |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  |  | .1  | .0  | 1.6  | 1.6   | .0    | .0    | .0  |  | .3   | 3.2       |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .3   | .7    | .1    | .0    | .0  |  | .1   | 1.0       |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .2    | .1    | .0    | .0  |  | .0   | .4        |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .1    | .0    | .0  |  | .1   | .1        |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   | .0        |
| TOT PCT | .2  | .5   | .1    | .0    | .0    | .0  |  | .8  | .5  | 6.9  | 3.4   | .3    | .0    | .0  |  | 11.1 | 97.3      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT QBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 4.8 | 5.8  | .5    | .0    | .0    | .0  | 11.0  |         |
| 1-2     | 2.0 | 24.8 | 9.8   | .0    | .0    | .0  | 36.6  |         |
| 3-4     | .2  | 10.7 | 17.6  | .5    | .0    | .0  | 29.1  |         |
| 5-6     | .0  | 2.2  | 11.2  | 1.0   | .0    | .0  | 14.3  |         |
| 7       | .0  | .2   | 5.0   | .8    | .0    | .0  | 6.1   |         |
| 8-9     | .0  | .1   | 1.2   | .3    | .0    | .0  | 1.6   |         |
| 10-11   | .0  | .0   | .4    | .5    | .0    | .0  | .9    |         |
| 12      | .0  | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 7.1 | 43.8 | 45.9  | 3.2   | .0    | .0  | 100.0 | 3416    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.2 | 11.0 | 12.1 | 6.4  | 3.4  | .7  | .6    | .1  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1580  | 4        |
| 6-7          | .0  | 1.3  | 6.2  | 6.3  | 4.1  | 1.4 | .8    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 911   | 5        |
| 8-9          | .0  | .7   | 2.6  | 2.8  | 2.7  | 1.7 | 1.0   | .4  | .2    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 537   | 6        |
| 10-11        | .0  | 1.0  | .9   | 1.1  | 1.1  | .7  | .9    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 258   | 6        |
| 12-13        | .0  | .0   | 1.7  | .5   | .4   | .5  | .2    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 159   | 5        |
| >13          | .0  | .0   | .0   | .3   | .3   | .2  | .3    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 67    | 9        |
| INLET        | 3.4 | 5.4  | 5.8  | 3.0  | 1.3  | 1.2 | .5    | .1  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 935   | 3        |
| TOTAL        | 206 | 863  | 1301 | 907  | 590  | 286 | 190   | 55  | 40    | 7     | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4447  | 4        |
| PCT          | 4.6 | 19.4 | 29.3 | 20.4 | 13.3 | 6.4 | 4.3   | 1.2 | .9    | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

MARCH

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FUG WD PCPN | FUG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | *    | *         | .1   | .0        | .0   | .0              | .0   | .1              | .0             | .5                      | 4.8         | .1                  | 9.2        | 2.0             | 83.5       |
| NE                 | .0   | .0        | *    | .0        | .0   | .0              | .0   | *               | .0             | .5                      | 4.2         | .1                  | 10.6       | 5.7             | 78.9       |
| E                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 2.8         | .0                  | 15.9       | 7.5             | 73.8       |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 9.1         | .0                  | 7.6        | 1.5             | 81.8       |
| S                  | .0   | 3.1       | .0   | .0        | .0   | .0              | .0   | 3.1             | .0             | .0                      | 17.2        | .0                  | 9.4        | 2.3             | 68.0       |
| SW                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 2.2                     | 7.7         | .0                  | 10.4       | 2.2             | 77.5       |
| W                  | *    | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 2.4                     | 13.6        | .0                  | 13.8       | 2.0             | 68.2       |
| NW                 | *    | .0        | .1   | .0        | .0   | .0              | .0   | .1              | .1             | .8                      | 7.5         | *                   | 11.1       | 2.4             | 78.0       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 9.7         | .0                  | 10.8       | 3.2             | 76.3       |
| TOT PCT            | *    | *         | .1   | .0        | .0   | .0              | .0   | .1              | *              | .6                      | 5.3         | .1                  | 9.8        | 2.7             | 81.5       |
| TOT OBS:           | 7437 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                       |                  |  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|-----------------------|------------------|--|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME | PCPN PAST<br>HOUR       | THOR<br>LTNG | FOG<br>WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST | NO<br>SIG<br>WEA |  |
| 00003         | .1                 | .0           | .1   | .0           | .0   | .0                    | .0   | .2                 | .0                      | .8           | 4.1               | .1                        | 8.6           | 2.5                   | 83.7             |  |
| 00009         | .0                 | .1           | .1   | .0           | .0   | .0                    | .0   | .1                 | .1                      | 1.2          | 5.9               | .0                        | 8.6           | 2.4                   | 81.7             |  |
| 12015         | .0                 | .1           | .0   | .0           | .0   | .0                    | .0   | .1                 | .0                      | .0           | 5.5               | .2                        | 11.3          | 2.9                   | 80.1             |  |
| 18021         | .1                 | .0           | .1   | .0           | .0   | .0                    | .0   | .1                 | .0                      | .3           | 5.7               | .0                        | 10.8          | 2.9                   | 80.2             |  |
| TOT PCT       | *                  | *            | .1   | .0           | .0   | .0                    | .0   | .1                 | *                       | .6           | 5.3               | .1                        | 9.9           | 2.7                   | 81.4             |  |
| TOT OBS:      | 7605               |              |      |              |      |                       |      |                    |                         |              |                   |                           |               |                       |                  |  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |  |
|----------|--------------------|------|-------|-------|-------|----|-------|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 |    | 00    |       |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |  |
| N        | 1.1                | 21.6 | 35.8  | 2.8   | .1    | .0 |       | 61.4  | 12.7      |          | 62.1     | 70.4       | 62.6  | 57.5  | 60.9  | 65.1  | 63.1  | 56.4  |  |
| NE       | .5                 | 7.6  | 11.3  | 1.7   | *     | .0 |       | 21.1  | 13.0      |          | 17.0     | 9.4        | 19.0  | 28.9  | 24.7  | 15.7  | 19.7  | 24.5  |  |
| E        | .2                 | .8   |       | *     | *     | .0 |       | 1.4   | 8.6       |          | .9       | .4         | 1.1   | 2.0   | 2.4   | .8    | 1.0   | .9    |  |
| SE       | *                  | .1   | *     | .0    | .0    | .0 |       | .2    | 7.9       |          | .2       | .0         | .1    | .2    | .4    | .1    | .1    | .1    |  |
| S        | .1                 | .2   | .1    | .0    | .0    | .0 |       | .4    | 7.8       |          | .5       | 1.4        | .4    | .2    | .4    | .4    | .4    | .4    |  |
| SW       | .2                 | .4   | *     | .0    | .0    | .0 |       | .6    | 5.6       |          | .9       | .9         | .6    | .3    | .5    | .0    | .6    | .8    |  |
| W        | .3                 | 1.0  | .1    | *     | .0    | .0 |       | 1.5   | 6.2       |          | 1.9      | 1.0        | 1.8   | 1.1   | .7    | 1.6   | 1.7   | 1.9   |  |
| NW       | .7                 | 7.0  | 4.4   | .1    | .0    | .0 |       | 12.2  | 9.7       |          | 15.2     | 15.3       | 12.5  | 6.4   | 9.1   | 14.0  | 12.4  | 14.1  |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0    | .0        |          | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 1.2                |      |       |       |       |    |       | 1.2   | .0        |          | 1.3      | 1.1        | 1.8   | 1.5   | .9    | 2.2   | .9    | .8    |  |
| TOT OBS  | 580                | 5142 | 6919  | 616   | 12    | 0  | 13269 |       | 12.0      |          | 2618     | 175        | 2629  | 1154  | 2734  | 182   | 2590  | 1187  |  |
| TOT PCT  | 4.4                | 38.8 | 52.1  | 4.6   | .1    | .0 |       | 100.0 |           |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |    | 41+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |
|----------|------|--------------------|-------|-------|----|-------|-----------|----------|----------|------------|-------|-------|----|
|          |      | 7-16               | 17-27 | 28-40 | 00 |       |           |          |          | 03         | 06    | 12    | 18 |
| N        | 0.8  | 39.4               | 14.8  | .3    | *  |       | 61.4      | 12.7     | 62.7     | 61.0       | 61.2  | 61.0  |    |
| NE       | 2.7  | 12.3               | 5.7   | .4    | .0 |       | 21.1      | 13.0     | 16.5     | 22.0       | 24.1  | 21.2  |    |
| E        | .6   | .7                 | .1    | *     | .0 |       | 1.4       | 8.6      | .9       | 1.4        | 2.3   | 1.0   |    |
| SE       | .1   | .1                 | *     | .0    | .0 |       | .2        | 7.9      | .2       | .1         | .4    | .1    |    |
| S        | .2   | .2                 | *     | .0    | .0 |       | .4        | 7.8      | .5       | .3         | .4    | .4    |    |
| SW       | .4   | .2                 | *     | .0    | .0 |       | .6        | 5.6      | .9       | .5         | .4    | .6    |    |
| W        | 1.0  | .5                 | *     | .0    | .0 |       | 1.5       | 6.2      | 1.8      | 1.6        | .8    | 1.8   |    |
| NW       | 3.3  | 7.8                | 1.0   | *     | .0 |       | 12.2      | 9.7      | 15.2     | 11.3       | 9.4   | 12.9  |    |
| VAR      | .0   | .0                 | .0    | .0    | .0 |       | .0        | .0       | .0       | .0         | .0    | .0    |    |
| CALM     | 1.2  |                    |       |       |    |       | 1.2       | .0       | 1.3      | 1.7        | 1.0   | .9    |    |
| TOT OBS  | 2183 | 8105               | 2884  | 96    | 1  | 13269 |           | 12.0     | 2793     | 3783       | 2916  | 3777  |    |
| TOT PCT  | 16.5 | 61.1               | 21.7  | .7    | *  |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |    |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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14.9N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3  | 4-10  | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|------|-------|--------------------|-------|-------|-----|------|----------|-----------|
|      |      |      |       | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000 | 1.3  | 3.3  | 39.3  | 52.0               | 4.1   | *     | .0  | 11.8 | 100.0    | 2793      |
| 0600 | 1.7  | 3.0  | 40.5  | 50.0               | 4.7   | .1    | .0  | 11.8 | 100.0    | 3783      |
| 1200 | 1.0  | 3.1  | 36.8  | 53.8               | 5.2   | .1    | .0  | 12.3 | 100.0    | 2916      |
| 1800 | .9   | 3.1  | 38.1  | 53.2               | 4.6   | .1    | .0  | 12.1 | 100.0    | 3777      |
| TOT  | 1.65 | 4.15 | 51.42 | 69.19              | 6.16  | 12    | 0   | 12.0 |          | 13269     |
| PCT  | 1.2  | 3.1  | 38.8  | 52.1               | 4.6   | .1    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 9 | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-------|-----------|------------------|
| N        | 50.9 | 6.3  | 7.6  | 3.0   |           | 1.5              |
| NE       | 9.6  | 1.7  | 1.9  | .6    |           | 1.8              |
| E        | .6   | .2   | .1   | .1    |           | 2.5              |
| SE       | .1   | .1   | *    | .0    |           | 2.3              |
| S        | .4   | *    | *    | *     |           | 1.1              |
| SW       | .4   | .1   | .1   | *     |           | 1.4              |
| W        | 1.0  | .2   | .1   | .1    |           | 1.5              |
| NW       | 10.1 | 1.2  | 1.4  | .6    |           | 1.5              |
| VAR      | .0   | .0   | .0   | .0    |           | .0               |
| CALM     | 1.0  | .2   | .2   | .1    |           | 1.6              |
| TOT OBS  | 4537 | 611  | 700  | 271   | 6119      | 1.6              |
| TOT PCT  | 74.1 | 10.0 | 11.4 | 4.4   | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| *   | .1  | .2  | .5  | 1.4  | 1.1  | .6   | .4   | .3   | 1.1   | 62.1            |           |
| .0  | .0  | *   | .1  | .2   | .3   | .2   | .1   | .1   | .2    | 12.4            |           |
| .0  | .0  | .0  | .0  | .0   | .1   | *    | *    | *    | *     | .8              |           |
| .0  | .0  | .0  | .0  | .0   | *    | .0   | *    | .0   | .0    | .2              |           |
| .0  | .0  | .0  | .0  | .0   | *    | .0   | *    | .0   | .0    | .4              |           |
| .0  | .0  | .0  | .0  | .0   | *    | .0   | .0   | .0   | .0    | .6              |           |
| .0  | *   | .0  | .0  | *    | .0   | .0   | *    | .0   | *     | 1.3             |           |
| *   | *   | .1  | .1  | .2   | .2   | .1   | *    | .0   | .2    | 12.2            |           |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| *   | .0  | .0  | *   | *    | *    | *    | .0   | .0   | *     | 1.3             |           |
| 5   | 6   | 20  | 50  | 119  | 112  | 58   | 35   | 23   | 101   | 5590            | 6119      |
| .1  | .1  | .3  | .8  | 1.9  | 1.8  | .9   | .6   | .4   | 1.7   | 91.4            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |         |         |         |           |           |            |         |
|----------------|-----------|---------|---------|---------|-----------|-----------|------------|---------|
|                | * OR >10  | * OR >5 | * OR >2 | * OR >1 | * OR >1/2 | * OR >1/4 | * OR >50YD | * OR >0 |
| * OR >6500     | 1.1       | 1.9     | 2.0     | 2.0     | 2.0       | 2.0       | 2.0        | 2.0     |
| * OR >5000     | 1.5       | 2.4     | 2.6     | 2.6     | 2.6       | 2.6       | 2.6        | 2.6     |
| * OR >3500     | 2.2       | 3.3     | 3.5     | 3.6     | 3.6       | 3.6       | 3.6        | 3.6     |
| * OR >2000     | 3.1       | 5.0     | 5.3     | 5.3     | 5.3       | 5.3       | 5.3        | 5.3     |
| * OR >1000     | 4.3       | 6.7     | 7.2     | 7.2     | 7.2       | 7.2       | 7.2        | 7.2     |
| * OR >600      | 4.8       | 7.5     | 8.0     | 8.0     | 8.0       | 8.0       | 8.0        | 8.0     |
| * OR >300      | 4.9       | 7.7     | 8.3     | 8.3     | 8.3       | 8.3       | 8.4        | 8.4     |
| * OR >150      | 4.9       | 7.8     | 8.4     | 8.4     | 8.4       | 8.4       | 8.4        | 8.4     |
| * OR >0        | 4.9       | 7.8     | 8.5     | 8.5     | 8.5       | 8.5       | 8.5        | 8.5     |
| TOTAL          | 304       | 487     | 526     | 528     | 528       | 528       | 529        | 529     |

TOTAL NUMBER OF OBS: 6214

PCT FREQ NH <5/8: 91.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | DBSCD | TOTAL OBS |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 72.3 | 8.0 | 4.2 | 3.5 | 2.6 | 1.9 | 2.5 | 2.1 | 2.8 | .1    | 6403      |



F/G 4/2

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/G 4/2  
SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (SSMO). WEST AF--ETC(U)  
NOV 76

F/G 4/2  
T AF--ETC(U)

SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS  
NOV 76

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PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1859-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .1   | *    | .0  | .0 | *  | *  | .0  | .1   | .0  | .0   | .0    | .1           |
|              | TOT %  | .1   | *    | .0  | .0 | *  | *  | .0  | .1   | .0  | .0   | .0    | .1           |
| 1/2<1        | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | 1.2  | .3   | *   | *  | *  | *  | .1  | .4   | .0  | .0   | .0    | 2.0          |
|              | TOT %  | 1.2  | .3   | *   | *  | *  | *  | .1  | .4   | .0  | .0   | .0    | 2.0          |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | .8   | .5   | .1  | .0 | *  | *  | .1  | .3   | .0  | .0   | .0    | 1.7          |
|              | TOT %  | .8   | .5   | .1  | .0 | *  | *  | .1  | .3   | .0  | .0   | .0    | 1.7          |
| 2<5          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | 3.3  | .9   | .1  | *  | *  | .1 | .2  | .9   | .0  | .2   | .5    | 5.6          |
|              | TOT %  | 3.3  | .9   | .1  | *  | *  | .1 | .2  | .9   | .0  | .2   | .5    | 5.6          |
| 5<10         | PCP    | .1   | *    | .0  | .0 | *  | .0 | .0  | *    | .0  | .0   | .1    | .1           |
|              | NO PCP | 17.9 | 4.7  | .4  | *  | .1 | .2 | .7  | 5.3  | .0  | .7   | 30.1  |              |
|              | TOT %  | 18.0 | 4.7  | .4  | *  | .1 | .2 | .7  | 5.3  | .0  | .7   | 30.2  |              |
| 10+          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    | .0           |
|              | NO PCP | 42.8 | 8.5  | .5  | .2 | .2 | .3 | .7  | 6.7  | .0  | .4   | 60.3  |              |
|              | TOT %  | 42.8 | 8.5  | .5  | .2 | .2 | .3 | .7  | 6.7  | .0  | .4   | 60.3  |              |
| TOT OBS      |        | 7418 |      |     |    |    |    |     |      |     |      |       |              |
| TOT PCT      |        | 66.1 | 14.9 | 1.1 | .2 | .4 | .6 | 1.7 | 13.7 | .0  | 1.2  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | *  | *  | .0  | .0   | .0  | *    | *     |              |
|              | 4-10       | *    | *    | *   | .0 | .0 | .0 | *   | .1   | .0  | *    | .1    |              |
|              | 11-21      | *    | *    | *   | .0 | .0 | .0 | .0  | *    | .0  | *    | .1    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0   | .0  | *    | .0    |              |
|              | TOT %      | *    | *    | *   | .0 | .0 | *  | *   | .1   | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | *    | *    | .0  | .0 | .0 | .0 | .0  | *    | .0  | .0   | .1    |              |
|              | 4-10       | .3   | .1   | *   | *  | *  | *  | .1  | .1   | .0  | .0   | .6    |              |
|              | 11-21      | .5   | .1   | .0  | .0 | .0 | .0 | .0  | .1   | .0  | .0   | .7    |              |
|              | 22+        | .1   | .1   | .0  | .0 | .0 | .0 | .0  | *    | .0  | *    | .1    |              |
|              | TOT %      | .9   | .2   | *   | *  | *  | *  | .1  | .3   | .0  | .0   | 1.6   |              |
| 1<2          | 0-3        | .1   | *    | *   | .0 | .0 | *  | *   | .1   | .0  | .1   | .3    |              |
|              | 4-10       | .3   | .2   | *   | .0 | *  | *  | *   | .2   | .0  | .0   | .8    |              |
|              | 11-21      | .3   | .2   | *   | .0 | .0 | .0 | *   | .1   | .0  | .0   | .6    |              |
|              | 22+        | *    | *    | .0  | .0 | .0 | .0 | .0  | .0   | .0  | *    | *     |              |
|              | TOT %      | .7   | .4   | .1  | .0 | *  | *  | .1  | .3   | .0  | .1   | 1.7   |              |
| 2<5          | 0-3        | .1   | .1   | *   | *  | *  | .1 | .1  | .1   | .0  | .2   | .6    |              |
|              | 4-10       | 1.6  | .5   | .1  | *  | *  | *  | .1  | .6   | .0  |      | 3.0   |              |
|              | 11-21      | 1.6  | .4   | *   | .0 | *  | *  | .3  | .0   | .0  |      | 2.4   |              |
|              | 22+        | .1   | *    | .0  | .0 | .0 | .0 | *   | .0   | .0  |      | .2    |              |
|              | TOT %      | 3.5  | 1.1  | .1  | *  | *  | .1 | .2  | 1.0  | .0  | .2   | 6.1   |              |
| 5<10         | 0-3        | .4   | .2   | *   | *  | .1 | .1 | .2  | .3   | .0  | .6   | 1.9   |              |
|              | 4-10       | 6.1  | 2.0  | .3  | *  | .1 | .2 | .4  | 2.9  | .0  |      | 12.1  |              |
|              | 11-21      | 9.9  | 2.6  | .1  | .0 | *  | *  | .1  | 1.9  | .0  |      | 14.6  |              |
|              | 22+        | .8   | .4   | *   | .0 | .0 | .0 | *   | .1   | .0  |      | 1.3   |              |
|              | TOT %      | 17.2 | 5.3  | .5  | *  | .1 | .2 | .7  | 5.2  | .0  | .6   | 29.9  |              |
| 10+          | 0-3        | .5   | .2   | .1  | *  | *  | *  | .1  | .3   | .0  | .4   | 1.7   |              |
|              | 4-10       | 13.0 | 3.6  | .3  | .1 | .1 | .2 | .4  | 3.5  | .0  |      | 21.2  |              |
|              | 11-21      | 25.8 | 6.3  | .1  | .1 | .1 | *  | .1  | 2.5  | .0  |      | 35.0  |              |
|              | 22+        | 1.6  | .8   | *   | .0 | .0 | .0 | .0  | *    | .0  |      | 2.5   |              |
|              | TOT %      | 41.0 | 11.0 | .5  | .1 | .2 | .3 | .6  | 6.4  | .0  | .4   | 60.5  |              |
| TOT OBS      |            | 9933 |      |     |    |    |    |     |      |     |      |       |              |
| TOT PCT      |            | 63.4 | 18.0 | 1.2 | .2 | .4 | .6 | 1.7 | 13.2 | .0  | 1.3  | 100.0 |              |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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14.9N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .1         | .1         | .1         | .5         | 1.3          | 1.2          | .6           | .5           | .2           | 1.6   | 6.2   | 93.8                | 1528         |
| 06009         | .1         | .2         | .5         | .9         | 2.5          | 2.1          | 1.1          | .1           | .4           | 1.7   | 9.7   | 90.3                | 1543         |
| 12015         | .1         | .0         | .4         | 1.0        | 1.9          | 2.6          | .9           | 1.0          | .4           | 1.5   | 9.8   | 90.2                | 1699         |
| 18021         | .0         | .1         | .3         | .7         | 1.9          | 1.1          | 1.1          | .6           | .4           | 1.6   | 7.9   | 92.1                | 1575         |
| TOT           | 5          | 6          | 20         | 50         | 121          | 113          | 60           | 76           | 23           | 102   | 536   | 5809                | 6345         |
| PCT           | .1         | .1         | .3         | .8         | 1.9          | 1.8          | .9           | .6           | .4           | 1.6   | 8.4   | 91.6                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | 1.4   | 1.1 | 4.8 | 29.4 | 53.2 | 2269         |
| 06009         | .3   | 1.9   | 1.9 | 5.2 | 30.8 | 59.9 | 2730         |
| 12015         | .2   | 1.2   | 1.6 | 7.9 | 28.6 | 60.4 | 2408         |
| 18021         | *    | 2.1   | 2.1 | 6.6 | 30.7 | 58.5 | 2700         |
| TOT           | 20   | 167   | 173 | 620 | 3026 | 6101 | 10107        |
| PCT           | .2   | 1.7   | 1.7 | 6.1 | 29.9 | 60.4 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .1           | .6         | 6.3         | 5.2             | 88.5               | 1491         |
| 06009         | .1           | .9         | 7.0         | 7.7             | 85.3               | 1499         |
| 12015         | .1           | .5         | 9.5         | 7.5             | 83.0               | 1678         |
| 18021         | .0           | .4         | 8.5         | 6.5             | 85.1               | 1546         |
| TOT           | 5            | 38         | 489         | 418             | 5307               | 6214         |
| PCT           | .1           | .6         | 7.9         | 6.7             | 85.4               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | *     | *     | .0    | *     | .0    | .0    | .0     | 4            | .1          |
| 80/84  | .0   | .0    | *     | .0    | .3    | .1    | .1    | .0     | 33           | .5          |
| 75/79  | .0   | .0    | *     | .5    | 1.4   | 3.1   | 1.9   | .3     | 421          | 6.8         |
| 70/74  | .0   | .0    | *     | .7    | 3.9   | 13.9  | 14.6  | 9.2    | 2381         | 38.3        |
| 65/69  | .0   | .0    | .0    | .1    | 1.0   | 8.6   | 25.9  | 14.7   | 3121         | 50.2        |
| 60/64  | .0   | .0    | .0    | .0    | *     | .3    | 1.6   | 2.2    | 255          | 4.1         |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | *      | 1            | *           |
| TOTAL  | 0    | 1     | 7     | 75    | 413   | 1615  | 2715  | 1390   | 6216         | 100.0       |
| PCT    | .0   | *     | .1    | 1.2   | 6.6   | 26.0  | 43.7  | 22.4   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E  | SE | S  | SW | W   | NW   | VAR | CALM |
|-------|------|------|----|----|----|----|-----|------|-----|------|
| 85/89 | *    | *    | *  | .0 | .0 | .0 | .0  | *    | .0  | .0   |
| 80/84 | .2   | .1   | *  | *  | .0 | *  | .0  | *    | .0  | *    |
| 75/79 | 3.9  | 1.2  | .1 | .1 | .1 | .1 | .2  | .9   | .0  | .2   |
| 70/74 | 24.4 | 6.6  | .0 | .1 | .2 | .4 | .7  | 4.9  | .0  | .4   |
| 65/69 | 35.4 | 6.5  | .1 | *  | .1 | .2 | .6  | 6.8  | .0  | .3   |
| 60/64 | 3.0  | .4   | *  | .0 | .0 | .0 | *   | .6   | .0  | *    |
| 55/59 | .0   | .0   | .0 | .0 | .0 | *  | .0  | .0   | .0  | .0   |
| TOTAL | 67.0 | 14.9 | .9 | .2 | .4 | .6 | 1.6 | 13.3 | .0  | 1.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 81  | 75  | 73  | 68  | 64 | 63 | 60  | 67.9 | 2833         |
| 06009         | 85  | 75  | 73  | 68  | 64 | 62 | 59  | 67.9 | 3788         |
| 12015         | 88  | 82  | 78  | 71  | 66 | 64 | 59  | 71.3 | 2902         |
| 18021         | 88  | 81  | 77  | 70  | 65 | 64 | 57  | 70.4 | 3760         |
| TOT           | 88  | 79  | 76  | 69  | 64 | 63 | 57  | 69.4 | 13283        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .3    | 3.2   | 16.3  | 46.2  | 34.1   | 85   | 1544         |
| 06009         | .0   | .5    | 3.4   | 16.6  | 46.1  | 33.4   | 85   | 1598         |
| 12015         | .0   | 3.5   | 12.2  | 36.6  | 38.6  | 9.1    | 78   | 1633         |
| 18021         | .0   | 1.2   | 7.8   | 33.5  | 43.1  | 14.5   | 80   | 1584         |
| TOT           | 0    | 89    | 426   | 1644  | 2762  | 1438   | 82   | 6359         |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | N<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *        | 3     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | 7     | .0       | .1        |
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | .1       | .0       | 9     | *        | .1        |
| 11/13              | .0       | .0       | *        | *        | .1       | .2       | .2       | *        | 43    | *        | .6        |
| 9/10               | .0       | .0       | *        | .1       | .3       | .3       | *        | *        | 58    | .1       | .8        |
| 7/8                | .0       | *        | .1       | .6       | 1.1      | .7       | .1       | .0       | 180   | .2       | 2.4       |
| 6                  | .0       | .0       | .2       | 1.0      | .9       | .3       | .1       | .0       | 166   | .2       | 2.2       |
| 5                  | .0       | *        | .7       | 2.2      | 1.9      | .3       | *        | .0       | 347   | .3       | 4.8       |
| 4                  | .0       | .1       | 1.5      | 3.3      | 1.9      | .5       | .1       | .0       | 506   | .4       | 7.0       |
| 3                  | .0       | .1       | 2.8      | 4.9      | 2.1      | .2       | .0       | .0       | 695   | .6       | 9.6       |
| 2                  | .0       | .4       | 4.6      | 6.1      | 1.7      | .3       | .1       | .0       | 909   | 1.0      | 12.3      |
| 1                  | .0       | .8       | 7.1      | 7.2      | 1.7      | .2       | .0       | .0       | 1161  | 1.2      | 15.8      |
| 0                  | .0       | .8       | 7.0      | 6.3      | 1.4      | .1       | *        | .0       | 1062  | .7       | 14.8      |
| -1                 | .0       | .5       | 5.7      | 3.9      | .8       | *        | *        | .0       | 753   | .4       | 10.6      |
| -2                 | .0       | .5       | 2.8      | 2.1      | .4       | .1       | *        | .0       | 406   | .2       | 5.7       |
| -3                 | .0       | .3       | 1.9      | 1.1      | .1       | *        | .0       | .0       | 242   | .1       | 3.5       |
| -4                 | .0       | .2       | 1.2      | .6       | .1       | .1       | .0       | .0       | 148   | .1       | 2.1       |
| -5                 | .0       | .2       | .5       | .2       | .1       | .0       | .0       | .0       | 65    | *        | .9        |
| -6                 | .0       | .1       | .4       | .2       | *        | .0       | .0       | .0       | 42    | *        | .6        |
| -7/-8              | *        | *        | .1       | .1       | *        | .0       | .0       | .0       | 19    | .0       | .3        |
| -9/-10             | .0       | .0       | *        | *        | *        | .0       | .0       | .0       | 5     | *        | .1        |
| -11/-13            | .0       | .0       | *        | *        | .0       | .0       | .0       | .0       | 3     | *        | *         |
| TOTAL              | 2        |          | 2517     |          | 1014     |          | 53       |          | 6832  | 364      | 6448      |
| PCT                | *        | 4.2      | 36.8     | 39.9     | 14.8     | 3.3      | .8       | .1       | 100.0 | 5.6      | 94.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | PCT | NE  |      |       |       |       |     |    | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|-----|------|-------|-------|-------|-----|----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |      |
| <1      | .5  | 2.0  | .2    | .0    | .0    | .0  | 2.7  | .3  | .5  | *    | .0    | .0    | .0    | .0  | .0 | .9   |
| 1-2     | .9  | 10.3 | 7.0   | .0    | .0    | .0  | 18.2 | .2  | 2.4 | 1.2  | .0    | .0    | .0    | .0  | .0 | 3.9  |
| 3-4     | .1  | 6.3  | 16.3  | .7    | .0    | .0  | 23.4 | *   | 1.7 | 2.3  | .2    | .0    | .0    | .0  | .0 | 4.2  |
| 5-6     | .0  | 1.8  | 13.3  | 1.2   | .0    | .0  | 16.2 | .0  | .3  | 2.2  | .4    | .0    | .0    | .0  | .0 | 2.9  |
| 7       | .0  | .2   | 4.6   | .5    | *     | .0  | 5.4  | .0  | .1  | .9   | .3    | .0    | .0    | .0  | .0 | 1.2  |
| 8-9     | .0  | .0   | 1.4   | .5    | .0    | .0  | 1.9  | .0  | .0  | *    | .3    | .2    | .0    | .0  | .0 | .5   |
| 10-11   | .0  | .1   | .4    | .3    | .0    | .0  | .8   | .0  | .0  | *    | .1    | .0    | .0    | .0  | .0 | .1   |
| 12      | .0  | .0   | *     | .1    | *     | .0  | .1   | .0  | .0  | *    | *     | *     | .0    | .0  | .0 | .1   |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .2   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | *    |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0   |
| TOT PCT | 1.4 | 20.7 | 43.4  | 3.4   | *     | .0  | 68.9 | .6  | 5.0 | 7.0  | 1.2   | *     | .0    | .0  | .0 | 13.8 |

| HGT     | E   |      |       |       |       |     |     | PCT | SE  |      |       |       |       |     |    | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-----|------|-------|-------|-------|-----|----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |    |     |
| <1      | *   | .2   | .0    | .0    | .0    | .0  | .3  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 1-2     | .1  | .1   | .1    | .0    | .0    | .0  | .3  | *   | .1  | .0   | .0    | .0    | .0    | .0  | .0 | .1  |
| 3-4     | .0  | .3   | .1    | .0    | .0    | .0  | .4  | .0  | *   | .1   | .0    | .0    | .0    | .0  | .0 | .1  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | *   | .1   | .0    | .0    | .0    | .0  | .0 | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 10-11   | .0  | .0   | *     | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0 | .0  |
| TOT PCT | .1  | .7   | .3    | .0    | .0    | .0  | 1.1 | *   | .1  | .1   | .0    | .0    | .0    | .0  | .0 | .3  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .0    | .0    | .0    | .0  | .0  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .1   | .0    | .0    | .0    | .0  | .0  | .1  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .1  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| TOT PCT | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0  | .2   | .1    | .0    | .0    | .0  | .0  | .3  |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |      | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |      |           |
| <1      | .2  | .3   | .0    | .0    | .0    | .0  | .5  | .3  | 1.1  | .1    | .0    | .0    | .0  | .4   | 1.4  |           |
| 1-2     | .2  | .2   | .0    | .0    | .0    | .0  | .4  | .2  | 3.3  | .9    | .0    | .0    | .0  | .4   | 4.5  |           |
| 3-4     | .1  | .1   | .1    | .0    | .0    | .0  | .2  | .0  | 1.6  | 2.3   | .0    | .0    | .0  | .4   | 4.0  |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .4   | 1.4   | .0    | .0    | .0  | .4   | 1.7  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .5    | .0    | .0    | .0  | .5   | .5   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0   |           |
| TOT PCT | .4  | .6   | .2    | .0    | .0    | .0  | 1.2 | .5  | 6.4  | 5.3   | .1    | .0    | .0  | 12.3 | 98.3 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.4 | 4.4  | .3    | .0    | .0    | .0  | 8.1   |         |
| 1-2     | 1.9 | 16.6 | 9.2   | .0    | .0    | .0  | 27.7  |         |
| 3-4     | .2  | 10.0 | 21.0  | .0    | .0    | .0  | 32.1  |         |
| 5-6     | .0  | 2.4  | 17.0  | 1.6   | .0    | .0  | 21.0  |         |
| 7       | .0  | .3   | 6.1   | .8    | .0    | .0  | 7.2   |         |
| 8-9     | .0  | .0   | 1.8   | .7    | .0    | .0  | 2.5   |         |
| 10-11   | .0  | .1   | .5    | .4    | .0    | .0  | 1.0   |         |
| 12      | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 13-16   | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.5 | 33.7 | 56.1  | 4.6   | .1    | .0  | 100.0 | 3859    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.3 | 8.9  | 13.5 | 7.0  | 3.0  | 1.0 | .4    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1733  | 4        |
| 6-7          | .0  | 1.4  | 5.7  | 7.2  | 5.3  | 2.3 | 1.0   | .3  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1148  | 5        |
| 8-9          | .0  | .4   | 1.9  | 3.7  | 3.6  | 2.0 | .8    | .4  | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 645   | 6        |
| 10-11        | .0  | .3   | .6   | 1.0  | .9   | 1.1 | .7    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 242   | 7        |
| 12-13        | .0  | .0   | .9   | .6   | .5   | .4  | .2    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 137   | 6        |
| >13          | .0  | .0   | .0   | .5   | .4   | .1  | .1    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 56    | 6        |
| INDET        | 3.3 | 4.4  | 5.0  | 3.8  | 1.9  | .6  | .3    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 959   | 3        |
| TOTAL        | 231 | 757  | 1259 | 1171 | 770  | 365 | 165   | 66  | 35    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4920  | 5        |
| PCT          | 4.7 | 13.4 | 27.6 | 23.8 | 15.7 | 7.4 | 3.4   | 1.3 | .7    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |  |  |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|--|--|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |  |
| N        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .1                      | .1             | .5        | 5.5         | .0                  | 13.0       | 3.6             | 77.3       |  |  |
| NE       | .0                 | .0        | .1   | .0        | .0   | .0              | .0   | .1                      | .0             | .3        | 5.4         | .0                  | 10.2       | 2.6             | 81.3       |  |  |
| E        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 2.3       | .0          | .0                  | 17.3       | 4.6             | 75.7       |  |  |
| SE       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 13.8        | .0                  | .0         | .0              | 86.2       |  |  |
| S        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 8.3         | .0                  | 19.3       | 5.5             | 67.0       |  |  |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 6.5       | 15.1        | .0                  | 10.3       | 7.6             | 60.5       |  |  |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | 1.7       | 12.3        | .0                  | 14.1       | 8.6             | 63.3       |  |  |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .8        | 10.0        | .0                  | 18.0       | 2.9             | 68.1       |  |  |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |  |  |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 15.7        | .0                  | 15.7       | 7.1             | 61.4       |  |  |
| TOT PCT  | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .1                      | .1             | .6        | 6.6         | .0                  | 13.5       | 3.6             | 75.6       |  |  |
| TOT OBS: | 7223               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |  |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |  |  |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|--|--|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THOR LTNG | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |  |
| 0000       | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .8        | 5.7         | .0                  | 12.0       | 3.4             | 77.9       |  |  |
| 0600       | .1                 | .0        | .2   | .0        | .0   | .0              | .0   | .3                      | .1             | 1.2       | 7.6         | .0                  | 10.4       | 3.2             | 77.2       |  |  |
| 1200       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .1             | .0        | 6.6         | .0                  | 15.6       | 4.4             | 73.3       |  |  |
| 1800       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .3        | 7.0         | .0                  | 16.3       | 3.5             | 72.9       |  |  |
| TOT PCT    | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .1                      | .1             | .6        | 6.7         | .0                  | 13.6       | 3.6             | 75.3       |  |  |
| TOT OBS:   | 7391               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |  |  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |           |          |          |  | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-----------|----------|----------|--|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | TOTAL OBS | PCT FREQ | MEAN SPD |  | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.0                | 20.2 | 38.2  | 2.9   | .0    | .0  | 62.4      | 13.0     |          |  | 62.1       | 66.8  | 62.4  | 60.1  | 64.4  | 67.1  | 62.9  | 58.0  |
| NE       | .2                 | 4.6  | 9.1   | 1.5   | .0    | .0  | 15.4      | 13.7     |          |  | 12.3       | 9.2   | 14.1  | 19.8  | 18.2  | 11.8  | 15.0  | 16.7  |
| E        | .0                 | .3   | .3    | .0    | .0    | .0  | .6        | 11.3     |          |  | .4         | .0    | .5    | .9    | .9    | 1.0   | .5    | .5    |
| SE       | .0                 | .1   | .1    | .0    | .0    | .0  | .1        | 8.5      |          |  | .2         | .0    | .2    | .0    | .3    | .0    | .0    | .1    |
| S        | .1                 | .2   | .0    | .0    | .0    | .0  | .3        | 6.0      |          |  | .4         | .0    | .3    | .1    | .4    | .9    | .3    | .4    |
| SW       | .2                 | .5   | .1    | .0    | .0    | .0  | .8        | 6.4      |          |  | .9         | .5    | 1.1   | .8    | .5    | .8    | .5    | .9    |
| W        | .5                 | 2.2  | .3    | .0    | .0    | .0  | 3.0       | 6.6      |          |  | 3.6        | 3.8   | 3.0   | 3.2   | 2.1   | 2.3   | 3.1   | 3.5   |
| NW       | .7                 | 9.0  | 6.4   | .2    | .0    | .0  | 16.3      | 10.2     |          |  | 18.8       | 18.0  | 16.9  | 14.1  | 12.4  | 15.0  | 17.1  | 18.7  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0        | .0       |          |  | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.0                |      |       |       |       |     | 1.0       | .0       |          |  | 1.2        | 1.6   | 1.7   | .9    | .7    | 1.0   | .5    | 1.1   |
| TOT OBS  | 486                | 4712 | 6900  | 584   | 5     | 0   | 12687     | 12.2     |          |  | 2526       | 190   | 2457  | 1109  | 2578  | 192   | 2512  | 1123  |
| TOT PCT  | 3.8                | 37.1 | 54.4  | 4.6   | .0    | .0  | 100.0     | 100.0    |          |  | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 09    | 12    | 18 |
| N        | 5.7                | 40.3 | 16.0  | .3    | .0  | 62.4      | 13.0     |          | 62.5       | 61.7  | 64.6  | 61.4  |    |
| NE       | 1.5                | 8.7  | 4.9   | .2    | .0  | 15.4      | 13.7     |          | 12.1       | 15.9  | 17.8  | 15.5  |    |
| E        | .2                 | .3   | .1    | .0    | .0  | .6        | 11.3     |          | .4         | .6    | .9    | .5    |    |
| SE       | .1                 | .0   | .0    | .0    | .0  | .1        | 8.5      |          | .2         | .1    | .3    | .1    |    |
| S        | .2                 | .1   | .0    | .0    | .0  | .3        | 6.0      |          | .3         | .2    | .5    | .4    |    |
| SW       | .5                 | .3   | .0    | .0    | .0  | .8        | 6.4      |          | .9         | 1.0   | .6    | .6    |    |
| W        | 1.7                | 1.2  | .1    | .0    | .0  | 3.0       | 6.6      |          | 3.6        | 3.0   | 2.1   | 3.2   |    |
| NW       | 3.8                | 10.8 | 1.7   | .0    | .0  | 16.3      | 10.2     |          | 18.8       | 16.0  | 12.6  | 17.6  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       |          | .0         | .0    | .0    | .0    |    |
| CALM     | 1.0                |      |       |       |     | 1.0       | .0       |          | 1.2        | 1.6   | .8    | .7    |    |
| TOT OBS  | 1872               | 7830 | 2908  | 76    | 1   | 12687     | 12.2     |          | 2716       | 3566  | 2770  | 3635  |    |
| TOT PCT  | 14.8               | 61.7 | 22.9  | .6    | .0  | 100.0     | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 1.3  | 3.1 | 37.6 | 54.1               | 3.9   | *     | .0  | 12.0  | 100.0    | 2716      |
| 06009 | 1.4  | 3.2 | 38.5 | 52.5               | 4.3   | .0    | .0  | 11.9  | 100.0    | 3566      |
| 12015 | .8   | 2.8 | 35.7 | 55.2               | 5.5   | .1    | .0  | 12.5  | 100.0    | 2770      |
| 18021 | .7   | 2.2 | 36.5 | 55.8               | 4.8   | *     | .0  | 12.4  | 100.0    | 3635      |
| TOT   | 130  | 396 | 4717 | 6900               | 584   | 5     | 0   | 12.2  |          | 12687     |
| PCT   | 1.0  | 2.8 | 37.1 | 54.4               | 4.6   | *     | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 47.3 | 7.8  | 8.5  | 3.4          |              | 1.8                    |
| NE       | 7.8  | 1.6  | 1.9  | .6           |              | 2.1                    |
| E        | .3   | .2   | .1   | *            |              | 2.4                    |
| SE       | .1   | .1   | *    | .1           |              | 4.0                    |
| S        | .3   | *    | *    | .0           |              | 1.1                    |
| SW       | .4   | *    | .1   | *            |              | 1.7                    |
| W        | 1.6  | .2   | .3   | .3           |              | 2.2                    |
| NW       | 10.3 | 2.1  | 2.1  | 1.3          |              | 2.1                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .8   | .1   | .1   | .2           |              | 2.0                    |
| TOT OBS  | 4120 | 723  | 787  | 350          | 5980         | 1.9                    |
| TOT PCT  | 68.9 | 12.1 | 13.2 | 5.9          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NM <5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| .2         | .0         | .1         | .6         | 1.2          | 1.3          | .9           | .2           | .3           | 1.3   | 61.0               |              |
| *          | .0         | .0         | .2         | .5           | .3           | .2           | .1           | .1           | .1    | 10.4               |              |
| .0         | .0         | .0         | .0         | *            | .0           | .0           | *            | .0           | *     | .6                 |              |
| .0         | .0         | .0         | .0         | *            | *            | *            | .0           | .0           | *     | .1                 |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .3                 |              |
| *          | .0         | .0         | .0         | .0           | *            | *            | .0           | .0           | *     | .5                 |              |
| .1         | .0         | .0         | *          | *            | *            | .0           | *            | *            | .1    | 2.1                |              |
| *          | .0         | *          | .2         | .4           | .5           | .4           | *            | .1           | .4    | 13.7               |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| *          | .0         | .0         | .0         | *            | *            | .0           | .0           | .1           | .1    | .9                 |              |
| 27         | 0          | 5          | 62         | 133          | 131          | 90           | 18           | 35           | 120   | 5359               | 5980         |
| .5         | .0         | .1         | 1.0        | 2.2          | 2.2          | 1.3          | .3           | .6           | 2.0   | 89.6               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NM >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.0         | 2.1        | 2.5        | 2.5        | 2.6          | 2.6          | 2.6           | 2.6        |
| = OR >5000        | 1.1         | 2.3        | 2.8        | 2.8        | 2.9          | 2.9          | 2.9           | 2.9        |
| = OR >3500        | 1.9         | 3.6        | 4.3        | 4.3        | 4.3          | 4.3          | 4.3           | 4.3        |
| = OR >2000        | 3.2         | 5.6        | 6.5        | 6.5        | 6.5          | 6.5          | 6.5           | 6.5        |
| = OR >1000        | 4.7         | 7.7        | 8.8        | 8.8        | 8.8          | 8.8          | 8.8           | 8.8        |
| = OR >600         | 5.1         | 8.6        | 9.8        | 9.8        | 9.9          | 9.9          | 9.9           | 9.9        |
| = OR >300         | 5.1         | 8.7        | 9.9        | 9.9        | 10.0         | 10.0         | 10.0          | 10.0       |
| = OR >150         | 5.1         | 8.7        | 9.9        | 9.9        | 10.0         | 10.0         | 10.0          | 10.0       |
| = OR >0           | 5.2         | 9.0        | 10.3       | 10.3       | 10.4         | 10.4         | 10.4          | 10.4       |
| TOTAL             | 315         | 544        | 623        | 626        | 631          | 631          | 632           | 632        |

TOTAL NUMBER OF OBS: 6077

PCT FREQ NM <5/8: 89.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8 OBSCD | TOTAL<br>OBS |
|------|-----|-----|-----|-----|-----|-----|-----|---------|--------------|
| 66.3 | 8.2 | 6.3 | 4.8 | 3.5 | 2.5 | 2.5 | 2.5 | .4      | 6256         |

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

APRIL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E  | SE | S  | SW | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|----|----|----|----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | *    | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | *    | *    | .0 | .0 | .0 | *  | .1  | *    | .0  | *    | .2    |              |
|              | TOT %  | *    | *    | .0 | .0 | .0 | *  | .1  | *    | .0  | *    | .2    |              |
| 1/2<1        | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | 1.7  | .3   | .0 | .0 | *  | .1 | .1  | .6   | .0  | *    | 2.8   |              |
|              | TOT %  | 1.7  | .3   | .0 | .0 | *  | .1 | .1  | .6   | .0  | *    | 2.8   |              |
| 1<2          | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | 1.2  | .1   | .0 | .0 | *  | .1 | .6  | .0   | *   | 2.1  |       |              |
|              | TOT %  | 1.2  | .1   | .0 | .0 | *  | .1 | .6  | .0   | *   | 2.1  |       |              |
| 2<5          | PCP    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0    |              |
|              | NO PCP | 4.7  | .5   | *  | *  | *  | .1 | .4  | 1.9  | .0  | .2   | 7.9   |              |
|              | TOT %  | 4.7  | .5   | *  | *  | *  | .1 | .4  | 1.9  | .0  | .2   | 7.9   |              |
| 5<10         | PCP    | *    | .0   | .0 | .0 | .0 | .0 | .0  | *    | .0  | .0   | *     |              |
|              | NO PCP | 22.1 | 3.9  | .3 | .1 | .1 | .2 | 1.2 | 6.2  | .0  | .4   | 34.5  |              |
|              | TOT %  | 22.1 | 3.9  | .3 | .1 | .1 | .2 | 1.2 | 6.2  | .0  | .4   | 34.6  |              |
| 10+          | PCP    | *    | *    | .0 | .0 | .0 | .0 | *   | .0   | .0  | .0   | *     |              |
|              | NO PCP | 36.2 | 7.1  | .3 | .1 | .2 | .2 | .9  | 7.1  | .0  | .3   | 52.4  |              |
|              | TOT %  | 36.2 | 7.1  | .3 | .1 | .2 | .2 | .9  | 7.1  | .0  | .3   | 52.4  |              |
| TOT OBS      |        |      |      |    |    |    |    |     |      |     |      |       |              |
| TOT PCT      |        | 66.0 | 12.0 | .6 | .2 | .4 | .6 | 2.8 | 16.4 | .0  | 1.0  | 100.0 | 7213         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E  | SE | S  | SW | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|----|----|----|----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0 | .0 | .0 | *  | *   | *    | .0  | *    | .1    |              |
|              | 4-10       | *    | *    | .0 | .0 | .0 | *  | *   | *    | .0  | *    | .1    |              |
|              | 11-21      | .0   | *    | .0 | .0 | .0 | .0 | .0  | .0   | .0  | *    | *     |              |
|              | 22+        | *    | *    | .0 | .0 | .0 | .0 | .0  | .0   | .0  | *    | *     |              |
|              | TOT %      | *    | *    | .0 | .0 | .0 | *  | .1  | *    | .0  | *    | .2    |              |
| 1/2<1        | 0-3        | *    | *    | .0 | .0 | *  | *  | *   | *    | .0  | *    | .1    |              |
|              | 4-10       | .6   | .1   | .0 | .0 | *  | .1 | .1  | .3   | .0  | *    | 1.1   |              |
|              | 11-21      | .7   | .2   | .0 | .0 | .0 | .0 | *   | .2   | .0  | *    | 1.0   |              |
|              | 22+        | *    | *    | .0 | .0 | .0 | .0 | .0  | .0   | .0  | *    | *     |              |
|              | TOT %      | 1.3  | .3   | .0 | .0 | *  | .1 | .1  | .5   | .0  | *    | 2.2   |              |
| 1<2          | 0-3        | *    | .0   | .0 | .0 | .0 | *  | *   | *    | .0  | *    | .1    |              |
|              | 4-10       | .4   | *    | .0 | .0 | *  | *  | .1  | .4   | .0  | *    | 1.0   |              |
|              | 11-21      | .5   | .1   | .0 | .0 | .0 | .0 | .0  | .1   | .0  | *    | .7    |              |
|              | 22+        | *    | *    | .0 | .0 | .0 | .0 | .0  | .0   | .0  | *    | *     |              |
|              | TOT %      | 1.0  | .1   | .0 | .0 | *  | .1 | .1  | .6   | .0  | *    | 1.9   |              |
| 2<5          | 0-3        | .2   | *    | *  | *  | *  | *  | .1  | .2   | .0  | .2   | .7    |              |
|              | 4-10       | 1.6  | .2   | *  | .0 | *  | .1 | .3  | 1.0  | .0  | *    | 3.3   |              |
|              | 11-21      | 2.2  | .2   | .0 | *  | .0 | *  | *   | .7   | .0  | *    | 3.1   |              |
|              | 22+        | .3   | .1   | .0 | .0 | .0 | .0 | .0  | *    | .0  | *    | .3    |              |
|              | TOT %      | 4.3  | .5   | *  | *  | *  | .1 | .4  | 1.8  | .0  | .2   | 7.4   |              |
| 5<10         | 0-3        | .4   | .1   | .0 | *  | .1 | *  | .2  | .3   | .0  | .5   | 1.5   |              |
|              | 4-10       | 7.0  | 1.3  | .1 | *  | .1 | .2 | .9  | 3.4  | .0  | *    | 12.9  |              |
|              | 11-21      | 12.7 | 2.2  | .1 | *  | *  | *  | .1  | 2.5  | .0  | *    | 17.7  |              |
|              | 22+        | 1.0  | .4   | .0 | .0 | .0 | .0 | .0  | .1   | .0  | *    | 1.4   |              |
|              | TOT %      | 21.1 | 4.0  | .2 | *  | .2 | .2 | 1.2 | 6.3  | .0  | .5   | 33.6  |              |
| 10+          | 0-3        | .4   | .1   | *  | .0 | *  | *  | .1  | .2   | .0  | .3   | 1.3   |              |
|              | 4-10       | 10.3 | 2.4  | .2 | *  | .1 | .1 | .7  | 3.8  | .0  | *    | 17.6  |              |
|              | 11-21      | 24.4 | 5.4  | .2 | *  | *  | *  | .1  | 3.2  | .0  | *    | 33.4  |              |
|              | 22+        | 1.6  | .7   | *  | .0 | .0 | *  | .0  | .1   | .0  | *    | 2.5   |              |
|              | TOT %      | 36.8 | 8.6  | .3 | .1 | .1 | .2 | .9  | 7.3  | .0  | .3   | 54.7  |              |
| TOT OBS      |            |      |      |    |    |    |    |     |      |     |      |       |              |
| TOT PCT      |            | 64.5 | 13.5 | .6 | .1 | .3 | .6 | 2.8 | 16.5 | .0  | 1.0  | 100.0 | 9656         |

APRIL

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973AREA 0008 DAKAR  
14.9N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .3         | .0         | .0         | .6         | 1.5          | 1.8          | 1.4          | .3           | .6           | 2.0   | 8.6   | 91.4               | 1556         |
| 06009          | .5         | .0         | .2         | 1.6        | 2.4          | 2.8          | 2.0          | .3           | .3           | 2.3   | 12.3  | 87.7               | 1483         |
| 12015          | .7         | .0         | .1         | .8         | 2.3          | 2.0          | 1.2          | .2           | .7           | 1.5   | 9.4   | 90.6               | 1636         |
| 18021          | .3         | .0         | .1         | 1.0        | 2.7          | 2.2          | 1.3          | .3           | .7           | 2.3   | 10.8  | 89.2               | 1529         |
| TOT            | 27         | 0          | 5          | 63         | 139          | 134          | 90           | 18           | 35           | 124   | 635   | 5569               | 6204         |
| PCT            | .4         | .0         | .1         | 1.0        | 2.2          | 2.2          | 1.5          | .3           | .6           | 2.0   | 10.2  | 89.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | *    | 1.7   | 1.7 | 7.0 | 31.4 | 58.1 | 2248         |
| 06009          | .4   | 2.3   | 1.8 | 6.5 | 34.5 | 54.4 | 2608         |
| 12015          | .3   | 1.8   | 1.8 | 8.9 | 33.5 | 53.7 | 2313         |
| 18021          | *    | 2.8   | 2.4 | 7.8 | 35.6 | 51.4 | 2657         |
| TOT            | 19   | 216   | 193 | 740 | 3324 | 5333 | 9826         |
| PCT            | .2   | 2.2   | 2.0 | 7.5 | 33.8 | 54.3 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|----------------|-------------------|--------------|
| 00003          | .3            | .6         | 8.5         | 7.0            | 84.5              | 1521         |
| 06009          | .6            | .8         | 9.2         | 9.0            | 81.7              | 1439         |
| 12015          | .7            | 1.1        | 12.0        | 6.5            | 81.6              | 1610         |
| 18021          | .3            | .5         | 11.5        | 8.5            | 80.0              | 1507         |
| TOT            | 28            | 45         | 630         | 468            | 4979              | 6077         |
| PCT            | .5            | .7         | 10.4        | 7.7            | 81.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | .0    | *     | .0    | .0    | .0    | .0     | 1            | *           |
| 80/84  | .0   | .0    | *     | .1    | .5    | .5    | .2    | *      | 86           | 1.4         |
| 75/79  | .0   | .0    | .0    | .3    | 1.6   | 4.9   | 2.9   | 1.0    | 644          | 10.7        |
| 70/74  | .0   | .0    | *     | .2    | 2.9   | 12.1  | 15.9  | 6.2    | 2252         | 37.3        |
| 65/69  | .0   | .0    | *     | .1    | .7    | 8.6   | 24.9  | 13.6   | 2895         | 48.0        |
| 60/64  | .0   | .0    | .0    | .0    | *     | .1    | 1.1   | 1.3    | 153          | 2.6         |
| TOT    | 0    | 0     | 4     | 44    | 353   | 1987  | 2711  | 1334   | 6033         | 100.0       |
| PCT    | .0   | .0    | .1    | .7    | 5.9   | 26.3  | 44.9  | 22.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E  | SE | S  | SW | W   | NW   | VAR | CALM |
|-------|------|------|----|----|----|----|-----|------|-----|------|
| 85/89 | .0   | .0   | .0 | .0 | .0 | .0 | *   | .0   | .0  | .0   |
| 80/84 | .7   | .2   | .1 | *  | *  | *  | .1  | .2   | .0  | .1   |
| 75/79 | 5.7  | 1.5  | .1 | .1 | .1 | .1 | .7  | 2.2  | .0  | .1   |
| 70/74 | 24.0 | 4.9  | .3 | .1 | .2 | .3 | 1.2 | 5.8  | .0  | .5   |
| 65/69 | 34.6 | 9.0  | .3 | *  | .1 | .1 | .7  | 7.0  | .0  | .2   |
| 60/64 | 1.8  | .2   | .0 | .0 | .0 | .0 | *   | .5   | .0  | .0   |
| TOT   | 66.9 | 11.8 | .7 | .2 | .4 | .6 | 2.7 | 15.8 | .0  | 1.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 84  | 77  | 74  | 68  | 64 | 63 | 61  | 68.6 | 2745         |
| 06009          | 86  | 77  | 74  | 68  | 64 | 63 | 59  | 68.5 | 3566         |
| 12015          | 86  | 82  | 78  | 72  | 66 | 65 | 59  | 71.9 | 2747         |
| 18021          | 88  | 81  | 78  | 71  | 66 | 64 | 59  | 70.9 | 3598         |
| TOT            | 88  | 80  | 77  | 69  | 65 | 63 | 59  | 69.9 | 12656        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .1    | 1.8   | 16.5  | 48.7  | 33.0   | 86   | 1523         |
| 06009          | .0   | .5    | 3.0   | 14.8  | 47.6  | 34.1   | 86   | 1535         |
| 12015          | .0   | 2.0   | 11.4  | 39.7  | 38.1  | 8.9    | 78   | 1566         |
| 18021          | .0   | .6    | 6.8   | 33.6  | 44.8  | 14.2   | 81   | 1542         |
| TOT            | 0    | 49    | 357   | 1618  | 2759  | 1383   | 83   | 6166         |



## APRIL

PERIOD: (PRIMARY) 1924-1973  
(OVER-ALL) 1855-1973

TABLE 17

AREA 0008 DAKAR  
14.9N 17.9WPCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | W<br>FOG | WO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 3     | .0       | .0        |
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .1       | .0       | 7     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | .2       | .1       | .0       | 30    | .1       | .4        |
| 9/10               | .0       | .0       | .0       | .2       | .3       | .3       | .1       | .0       | 62    | .1       | .8        |
| 7/8                | .0       | .0       | .1       | .5       | 1.0      | .6       | .2       | .0       | 152   | .2       | 2.1       |
| 6                  | .0       | .0       | .2       | .7       | 1.1      | .3       | .1       | .0       | 156   | .2       | 2.2       |
| 5                  | .0       | .0       | .5       | 1.7      | 1.5      | .6       | .1       | .0       | 290   | .4       | 4.1       |
| 4                  | .0       | .0       | 1.3      | 2.7      | 1.8      | .4       | .1       | .0       | 415   | .4       | 5.9       |
| 3                  | .0       | .1       | 2.7      | 4.1      | 2.1      | .5       | .1       | .0       | 629   | .7       | 8.9       |
| 2                  | .0       | .3       | 4.4      | 5.5      | 2.2      | .7       | .0       | .0       | 863   | 1.2      | 12.0      |
| 1                  | .0       | .6       | 6.8      | 6.4      | 2.1      | .6       | .0       | .0       | 1087  | 1.5      | 15.1      |
| 0                  | .0       | .5       | 7.3      | 5.8      | 1.8      | .6       | .0       | .0       | 1051  | 1.1      | 15.0      |
| -1                 | .0       | .4       | 5.1      | 4.3      | 1.6      | .2       | .0       | .0       | 757   | .7       | 10.8      |
| -2                 | .0       | .4       | 3.5      | 2.4      | .8       | .2       | .0       | .0       | 485   | .5       | 6.9       |
| -3                 | .0       | .3       | 1.9      | 1.2      | .5       | .1       | .0       | .0       | 257   | .1       | 3.8       |
| -4                 | .0       | .2       | 1.1      | .8       | .3       | .0       | .0       | .0       | 151   | .1       | 2.2       |
| -5                 | .0       | .1       | .6       | .5       | .1       | .0       | .0       | .0       | 83    | .1       | 1.2       |
| -6                 | .0       | .1       | .2       | .1       | .0       | .0       | .0       | .0       | 25    | .0       | .4        |
| -7/-8              | .0       | .0       | .2       | .1       | .0       | .0       | .0       | .0       | 31    | .0       | .4        |
| -9/-10             | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 8     | .0       | .1        |
| -11/-13            | .0       | .0       | .0       | .1       | .0       | .0       | .0       | .0       | 7     | .0       | .1        |
| -14/-16            | .0       | .0       | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | .0        |
| TOTAL              | 3        |          | 2334     | 1147     |          | 70       |          | 1        | 6551  | 481      | 6070      |
| PCT                |          | 199      | 2438     | 359      |          | 1        |          |          | 100.0 | 7.3      | 92.7      |
|                    |          | 3.0      | 35.6     | 37.2     | 17.5     | 5.5      | 1.1      |          |       |          |           |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |
| <1      | .3  | 1.5  | .2    | .0    | .0    | .0  | 2.1  | .1  | .3   | .1    | .0    | .0    | .0  | .4   |
| 1-2     | .5  | 8.8  | 7.8   | .0    | .0    | .0  | 17.1 | .1  | 1.9  | 1.1   | .0    | .0    | .0  | 3.1  |
| 3-4     | .2  | 6.9  | 17.5  | .5    | .0    | .0  | 25.1 | .0  | .6   | 2.5   | .1    | .0    | .0  | 3.3  |
| 5-6     | .0  | 1.4  | 12.7  | .7    | .0    | .0  | 14.8 | .0  | .1   | 1.5   | .4    | .0    | .0  | 2.0  |
| 7       | .0  | .3   | 5.0   | .9    | .0    | .0  | 6.2  | .0  | .0   | .8    | .3    | .0    | .0  | 1.0  |
| 8-9     | .0  | .1   | .9    | .5    | .0    | .0  | 1.5  | .0  | .0   | .2    | .0    | .0    | .0  | .3   |
| 10-11   | .0  | .0   | .2    | .3    | .0    | .0  | .5   | .0  | .0   | .0    | .1    | .0    | .0  | .2   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.2 | 19.0 | 44.3  | 2.9   | .0    | .0  | 67.5 | .2  | 3.0  | 6.2   | .9    | .0    | .0  | 10.3 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .2   | .2    | .0    | .0    | .0  | .4  | .1  | .1   | .1    | .0    | .0    | .0  | .2  |

PERIOD: (OVER-ALL) 1963-1973

APRIL

TABLE 18 (CONT)

AREA 0008 DAKAR  
14.9N 17.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |  | PCT | SW  |      |       |       |       |     |  | PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     |
| <1      | .0  | .0   | .0    | .0    | .0    | .0  |  | .1  | .0  | .0   | .0    | .0    | .0    | .0  |  | .1  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  |  | .1  | .2  | .1   | .0    | .0    | .0    | .0  |  | .3  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  |
| TOT PCT | .1  | .1   | .0    | .0    | .0    | .0  |  | .2  | .1  | .3   | .1    | .0    | .0    | .0  |  | .4  |

| HGT     | W   |      |       |       |       |     |  | PCT | NW  |      |       |       |       |     |  | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|--|-----|-----|------|-------|-------|-------|-----|--|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |  |      |           |
| <1      | .3  | .6   | .0    | .0    | .0    | .0  |  | .8  | .4  | 1.1  | .1    | .0    | .0    | .0  |  | 1.6  |           |
| 1-2     | .2  | 1.3  | .0    | .0    | .0    | .0  |  | 1.5 | .3  | 4.6  | 2.6   | .0    | .0    | .0  |  | 7.4  |           |
| 3-4     | .0  | .3   | .1    | .0    | .0    | .0  |  | .4  | .1  | 1.9  | 3.4   | .1    | .0    | .0  |  | 5.4  |           |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  |  | .1  | .0  | .3   | 1.4   | .0    | .0    | .0  |  | 1.7  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .1   | .4    | .0    | .0    | .0  |  | .5   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .1    | .0    | .0    | .0  |  | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  |  | .0  | .0  | .0   | .0    | .0    | .0    | .0  |  | .0   |           |
| TOT PCT | .5  | 2.1  | .2    | .0    | .0    | .0  |  | 2.8 | .7  | 8.0  | 8.0   | .2    | .0    | .0  |  | 16.9 | 98.6      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.5 | 3.6  | .3    | .0    | .0    | .0  | .0    | 7.4     |
| 1-2     | 1.4 | 16.7 | 11.4  | .0    | .0    | .0  | 29.6  |         |
| 3-4     | .3  | 9.7  | 23.2  | .7    | .0    | .0  | 33.9  |         |
| 5-6     | .1  | 1.8  | 15.6  | 1.0   | .0    | .0  | 18.5  |         |
| 7       | .0  | .4   | 6.1   | 1.2   | .0    | .0  | 7.7   |         |
| 8-9     | .0  | .2   | 1.3   | .5    | .0    | .0  | 2.0   |         |
| 10-11   | .0  | .0   | .2    | .5    | .0    | .0  | .7    |         |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 5.3 | 32.4 | 58.3  | 4.0   | .0    | .0  | 100.0 | 3747    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1   | 1-2  | 3-4   | 5-6   | 7    | 8-9  | 10-11 | 12  | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|------|------|-------|-------|------|------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | .7   | 7.1  | 12.1  | 8.8   | 3.5  | 1.1  | .4    | .2  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1653  | 4        |
| 6-7          | .1   | 1.6  | 6.7   | 8.8   | 6.5  | 1.7  | 1.1   | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1307  | 5        |
| 8-9          | .0   | .6   | 2.6   | 3.6   | 4.2  | 1.6  | .9    | .2  | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 683   | 6        |
| 10-11        | .0   | .4   | .5    | 1.1   | 1.2  | .6   | .5    | .2  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 221   | 6        |
| 12-13        | .0   | .0   | .7    | .5    | .3   | .3   | .1    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100   | 6        |
| >13          | .0   | .0   | .0    | .3    | .3   | .2   | .0    | .0  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 43    | 7        |
| INDET        | 1.9  | 4.0  | 5.0   | 3.4   | 2.1  | .8   | .6    | .1  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 875   | 4        |
| TOTAL        | 13.0 | 67.1 | 134.8 | 129.9 | 88.4 | 30.7 | 17.5  | 4.7 | 2.1   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4882  | 5        |
| PCT          | 2.7  | 13.7 | 27.6  | 26.6  | 18.1 | 6.3  | 3.6   | 1.0 | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

MAY

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FZLN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THOR LTNG               | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | *    | .1        | .1   | .0        | .0   | .0              | .0   | .2              | .1             | .7                      | 5.7         | .0                  | 10.6       | 2.0             | 80.7       |
| NE                 | .1   | .3        | .1   | .0        | .0   | .0              | .0   | .4              | .1             | .4                      | 6.0         | .0                  | 6.9        | .6              | 85.6       |
| E                  | 2.8  | 2.8       | .0   | .0        | .0   | .0              | .0   | 5.5             | .0             | .0                      | 7.6         | .0                  | 4.1        | 2.1             | 80.7       |
| SE                 | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | 9.1         | .0                  | 12.1       | .0              | 78.8       |
| S                  | 2.5  | .0        | .0   | .0        | .0   | .0              | .0   | 2.5             | .0             | .0                      | 10.0        | 1.3                 | 9.6        | 2.5             | 74.2       |
| SW                 | .5   | .0        | .0   | .0        | .0   | .0              | .0   | .5              | .0             | .5                      | 11.5        | .2                  | 9.8        | 3.4             | 74.1       |
| W                  | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | 1.5                     | 5.5         | .0                  | 10.8       | .5              | 81.7       |
| NW                 | .1   | .0        | .0   | .0        | .0   | .0              | .0   | .1              | *              | .9                      | 6.3         | .1                  | 11.4       | 1.3             | 80.0       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | 1.4            | 2.7                     | 9.6         | 1.4                 | 13.7       | .0              | 71.2       |
| TOT PCT            | .1   | .1        | .1   | .0        | .0   | .0              | .0   | .2              | .1             | .8                      | 6.0         | *                   | 10.5       | 1.7             | 80.7       |
| TOT OBS:           | 7583 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                    |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|--------------------|---------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THOR<br>LTNG | FGG WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST | NO<br>SIG WEA |
| 00003         | .0                 | .1           | .1   | .0           | .0   | .0                    | .0   | .2                      | .1                | 1.6          | 4.9            | .0                        | 9.2           | 1.5                | 82.5          |
| 06009         | .3                 | .2           | .2   | .0           | .0   | .0                    | .0   | .6                      | .1                | 1.1          | 7.0            | .1                        | 9.7           | 1.2                | 80.3          |
| 12015         | .0                 | .0           | .0   | .0           | .0   | .0                    | .0   | .0                      | .1                | .0           | 5.2            | .1                        | 11.4          | 2.1                | 81.1          |
| 18021         | .1                 | .0           | .0   | .0           | .0   | .0                    | .0   | .1                      | .1                | .5           | 7.2            | .0                        | 11.7          | 2.0                | 78.5          |
| TOT PCT       | .1                 | .1           | .1   | .0           | .0   | .0                    | .0   | .2                      | .1                | .8           | 6.1            | *                         | 10.5          | 1.7                | 80.6          |
| TOT OBS:      | 7741               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                    |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.0                | 19.1 | 34.0  | 2.9   | *     | .0  |       | 56.9      | 12.9     |          | 54.8       | 59.8  | 56.5  | 55.8  | 59.6  | 61.5  | 58.7  | 52.7  |
| NE       | .3                 | 3.3  | 7.9   | 1.0   | *     | .0  |       | 12.4      | 13.8     |          | 10.9       | 5.0   | 11.2  | 16.7  | 12.9  | 4.1   | 12.2  | 15.8  |
| E        | .1                 | .3   | .2    | *     | *     | .0  |       | .6        | 9.8      |          | .7         | .0    | .6    | .8    | .7    | .6    | .3    | .4    |
| SE       | *                  | .1   | *     | *     | .0    | .0  |       | .2        | 7.0      |          | .2         | .0    | .3    | .3    | .2    | .0    | *     | .1    |
| S        | .2                 | .4   | .1    | .0    | .0    | .0  |       | .7        | 5.8      |          | .5         | 1.5   | .8    | .7    | 1.0   | .9    | .4    | .3    |
| SW       | .2                 | 1.2  | .1    | .0    | .0    | .0  |       | 1.5       | 6.3      |          | 1.6        | 2.4   | 1.7   | 1.4   | 1.3   | 3.0   | 1.2   | 1.2   |
| W        | .6                 | 3.7  | .6    | *     | *     | .0  |       | 4.8       | 7.1      |          | 5.3        | 6.2   | 4.8   | 4.1   | 4.7   | 7.0   | 4.6   | 4.6   |
| NW       | 1.1                | 12.2 | 8.3   | .3    | *     | .0  |       | 21.8      | 10.1     |          | 24.4       | 23.9  | 22.6  | 19.3  | 18.7  | 22.9  | 22.0  | 23.7  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.1                |      |       |       |       |     |       | 1.1       | .0       |          | 1.6        | 1.2   | 1.5   | .9    | .9    | .0    | .5    | 1.2   |
| TOT OBS  | 604                | 5298 | 6790  | 547   | 7     | 0   | 13206 |           | 11.8     |          | 2824       | 166   | 2563  | 1184  | 2747  | 169   | 2562  | 1191  |
| TOT PCT  | 4.6                | 40.1 | 51.1  | 4.1   | .1    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 5.8                | 35.8 | 15.0  | .3    | .0  |           | 56.9     | 12.9     | 55.1       | 56.3  | 59.7  | 56.8  |    |
| NE       | 1.0                | 7.3  | 4.0   | .2    | .0  |           | 12.4     | 13.8     | 10.5       | 12.9  | 12.4  | 13.3  |    |
| E        | .2                 | .3   | .1    | *     | .0  |           | .6       | 9.8      | .6         | .0    | .7    | .3    |    |
| SE       | .1                 | *    | *     | .0    | .0  |           | .2       | 7.0      | .2         | .3    | .2    | *     |    |
| S        | .5                 | .2   | *     | .0    | .0  |           | .7       | 5.8      | .5         | .8    | 1.0   | .4    |    |
| SW       | .9                 | .5   | *     | .0    | .0  |           | 1.5      | 6.3      | 1.7        | 1.6   | 1.4   | 1.2   |    |
| W        | 2.5                | 2.3  | .1    | *     | .0  |           | 4.8      | 7.1      | 5.3        | 4.6   | 4.8   | 4.6   |    |
| NW       | 5.3                | 14.3 | 2.2   | *     | .0  |           | 21.8     | 10.1     | 24.4       | 21.5  | 18.9  | 22.5  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.1                |      |       |       |     |           | 1.1      | .0       | 1.5        | 1.3   | .9    | .7    |    |
| TOT OBS  | 2288               | 8021 | 2823  | 74    | 0   | 13206     |          | 11.8     | 2790       | 3747  | 2916  | 3753  |    |
| TOT PCT  | 17.3               | 60.7 | 21.4  | .6    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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14.9N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10  | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|------|-------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |      |       | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 00003 | 1.5  | 3.3  | 40.4  | 50.1               | 4.6   | *     | .0  | 11.8  | 100.0    | 2790      |
| 06009 | 1.3  | 3.8  | 43.8  | 46.8               | 4.2   | *     | .0  | 11.4  | 100.0    | 3747      |
| 12015 | .9   | 3.6  | 39.7  | 51.5               | 4.2   | .1    | .0  | 11.9  | 100.0    | 2916      |
| 18021 | .7   | 3.1  | 36.5  | 55.8               | 3.7   | .1    | .0  | 12.1  | 100.0    | 3753      |
| TOT   | 1.47 | 4.57 | 52.98 | 67.50              | 5.47  | .7    | .0  | 11.8  |          | 13206     |
| PCT   | 1.1  | 3.5  | 40.1  | 51.1               | 4.1   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & OBSCD | TOTAL OBS | MEAN CLOUD COVER |
|----------|------|------|------|-----------|-----------|------------------|
| N        | 34.5 | 8.6  | 12.2 | 5.6       |           | 2.7              |
| NE       | 3.3  | 1.3  | 1.9  | .7        |           | 3.3              |
| E        | .1   | *    | .2   | .1        |           | 4.4              |
| SE       | *    | *    | *    | .0        |           | 3.9              |
| S        | .5   | *    | .2   | *         |           | 2.4              |
| SW       | .6   | .2   | .4   | .2        |           | 3.8              |
| W        | 2.4  | .9   | 1.2  | .6        |           | 3.2              |
| NW       | 11.3 | 3.6  | 5.4  | 2.4       |           | 3.1              |
| VAR      | .0   | .0   | .0   | .0        |           | .0               |
| CALM     | .6   | .2   | .2   | .2        |           | 3.1              |
| TOT OBS  | 3160 | 886  | 1291 | 584       | 5921      | 2.9              |
| TOT PCT  | 53.4 | 15.0 | 21.8 | 9.9       | 100.0     |                  |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 ANY HGT | TOTAL OBS |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|-----------------|-----------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                 |           |
| N       | .1  | .1  | .2  | 1.1 | 2.9  | 2.7  | 1.1  | .5   | .5   | 2.1   | 49.7            |           |
| NE      | *   | *   | *   | .2  | .5   | .5   | .3   | *    | *    | *     | 5.4             |           |
| E       | .0  | .0  | .0  | .1  | .1   | .1   | *    | *    | *    | .0    | .2              |           |
| SE      | .0  | .0  | .0  | *   | .0   | .0   | .0   | *    | .0   | .0    | .1              |           |
| S       | .0  | .0  | *   | *   | *    | .0   | *    | .0   | *    | .0    | .7              |           |
| SW      | .0  | .0  | .0  | *   | .1   | .1   | *    | *    | .1   | *     | 1.1             |           |
| W       | .0  | *   | *   | .2  | .2   | .2   | .1   | *    | .0   | .2    | 4.2             |           |
| NW      | *   | *   | .1  | .5  | 1.3  | 1.4  | .3   | .2   | .1   | .7    | 18.2            |           |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0              |           |
| CALM    | .0  | .0  | .0  | .1  | .1   | .1   | *    | .0   | .0   | .1    | .9              |           |
| TOT OBS | 13  | 7   | 18  | 126 | 314  | 298  | 120  | 44   | 42   | 182   | 4757            | 5921      |
| TOT PCT | .2  | .1  | .3  | 2.1 | 5.3  | 5.0  | 2.0  | .7   | .7   | 3.1   | 80.3            | 100.0     |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|----------------|-----------|------|------|------|------|------|-------|------|
|                | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| * OR >6500     | 1.5       | 3.4  | 3.8  | 3.8  | 3.8  | 3.8  | 3.8   | 3.8  |
| * OR >5000     | 1.9       | 4.1  | 4.5  | 4.6  | 4.6  | 4.6  | 4.6   | 4.6  |
| * OR >3500     | 3.5       | 6.1  | 6.5  | 6.5  | 6.6  | 6.6  | 6.6   | 6.6  |
| * OR >2000     | 6.6       | 10.8 | 11.4 | 11.5 | 11.5 | 11.5 | 11.5  | 11.5 |
| * OR >1000     | 9.7       | 15.8 | 16.7 | 16.8 | 16.8 | 16.8 | 16.8  | 16.8 |
| * OR >600      | 11.0      | 17.9 | 18.8 | 18.9 | 18.9 | 19.0 | 19.0  | 19.0 |
| * OR >300      | 11.1      | 18.1 | 19.1 | 19.2 | 19.2 | 19.3 | 19.3  | 19.3 |
| * OR >150      | 11.1      | 18.2 | 19.2 | 19.3 | 19.4 | 19.4 | 19.4  | 19.4 |
| * OR >0        | 11.1      | 18.3 | 19.4 | 19.5 | 19.5 | 19.5 | 19.6  | 19.6 |
| TOTAL          | 667       | 1095 | 1163 | 1169 | 1170 | 1171 | 1172  | 1172 |

TOTAL NUMBER OF OBS: 5994

PCT FREQ NH <5/8: 80.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|-----------|
| 47.3 | 10.0 | 9.1 | 7.0 | 6.2 | 4.1 | 5.3 | 4.8 | 6.1 | .2    | 6243      |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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14.9N 17.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E  | SE | S  | SW | W   | NW   | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|--------|------|-----|----|----|----|----|-----|------|-----|------|------|--------------|
| <1/2         | PCP    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | NO PCP | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .1   | .0  | .0   | .1   | .1           |
|              | TOT %  | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .1   | .0  | .0   | .1   | .1           |
| 1/2<1        | PCP    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | NO PCP | 1.7  | .3  | .0 | .0 | .0 | .1 | .1  | .8   | .0  | .0   | .0   | 3.0          |
|              | TOT %  | 1.7  | .3  | .0 | .0 | .0 | .1 | .1  | .8   | .0  | .0   | .0   | 3.0          |
| 1<2          | PCP    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | NO PCP | 1.1  | .2  | .0 | .0 | .0 | .1 | .4  | .0   | .0  | .0   | .1   | 1.9          |
|              | TOT %  | 1.1  | .2  | .0 | .0 | .0 | .1 | .4  | .0   | .0  | .0   | .1   | 1.9          |
| 2<5          | PCP    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | NO PCP | 2.2  | .2  | .0 | .0 | .0 | .1 | 1.1 | .0   | .0  | .2   | .4   | 4.3          |
|              | TOT %  | 2.2  | .2  | .0 | .0 | .0 | .1 | 1.1 | .0   | .0  | .2   | .4   | 4.3          |
| 5<10         | PCP    | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .1   | .1           |
|              | NO PCP | 22.6 | 2.4 | .1 | .1 | .3 | .4 | 2.1 | 9.4  | .0  | .3   | 37.7 | 37.7         |
|              | TOT %  | 22.7 | 2.4 | .1 | .1 | .3 | .4 | 2.1 | 9.4  | .0  | .3   | 37.8 | 37.8         |
| 10+          | PCP    | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .1   | .1           |
|              | NO PCP | 32.2 | 4.7 | .3 | .0 | .4 | .7 | 2.2 | 11.7 | .0  | .4   | 52.8 | 52.8         |
|              | TOT %  | 32.2 | 4.7 | .3 | .0 | .4 | .7 | 2.2 | 11.8 | .0  | .4   | 52.8 | 52.8         |
| TOT OBS      |        |      |     |    |    |    |    |     |      |     |      |      | 7563         |
| TOT PCT      |        |      |     |    |    |    |    |     |      |     |      |      | 100.0        |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E  | SE | S  | SW | W   | NW   | VAR | CALM | PCT  | TOTAL<br>OBS |
|--------------|------------|------|-----|----|----|----|----|-----|------|-----|------|------|--------------|
| <1/2         | 0-3        | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | 4-10       | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | 11-21      | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | 22+        | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | TOT %      | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
| 1/2<1        | 0-3        | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .1   | .0  | .0   | .2   | .2           |
|              | 4-10       | .6   | .1  | .0 | .0 | .0 | .1 | .1  | .3   | .0  | .0   | 1.2  | 1.2          |
|              | 11-21      | .6   | .1  | .0 | .0 | .0 | .0 | .0  | .2   | .0  | .0   | 1.0  | 1.0          |
|              | 22+        | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .0   | .0           |
|              | TOT %      | 1.3  | .2  | .0 | .0 | .0 | .1 | .1  | .6   | .0  | .0   | 2.4  | 2.4          |
| 1<2          | 0-3        | .0   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .1   | .1   | .1           |
|              | 4-10       | .4   | .0  | .0 | .0 | .0 | .1 | .2  | .0   | .0  | .0   | .7   | .7           |
|              | 11-21      | .6   | .1  | .0 | .0 | .0 | .0 | .1  | .0   | .0  | .0   | .8   | .8           |
|              | 22+        | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .1   | .1           |
|              | TOT %      | 1.0  | .1  | .0 | .0 | .0 | .1 | .3  | .0   | .0  | .1   | 1.7  | 1.7          |
| 2<5          | 0-3        | .1   | .0  | .0 | .0 | .0 | .1 | .0  | .1   | .0  | .3   | .6   | .6           |
|              | 4-10       | 1.0  | .1  | .0 | .0 | .0 | .1 | .3  | .7   | .0  | .0   | 2.3  | 2.3          |
|              | 11-21      | 1.3  | .2  | .0 | .0 | .0 | .0 | .4  | .0   | .0  | .0   | 2.0  | 2.0          |
|              | 22+        | .1   | .0  | .0 | .0 | .0 | .0 | .0  | .0   | .0  | .0   | .2   | .2           |
|              | TOT %      | 2.5  | .4  | .0 | .0 | .1 | .2 | .3  | 1.2  | .0  | .3   | 5.0  | 5.0          |
| 5<10         | 0-3        | .3   | .0  | .0 | .0 | .1 | .1 | .2  | .4   | .0  | .3   | 1.6  | 1.6          |
|              | 4-10       | 6.5  | .8  | .0 | .0 | .2 | .3 | 1.4 | 4.7  | .0  | .0   | 14.0 | 14.0         |
|              | 11-21      | 13.5 | 1.8 | .1 | .0 | .0 | .0 | .3  | 3.6  | .0  | .0   | 19.4 | 19.4         |
|              | 22+        | 1.2  | .3  | .0 | .0 | .0 | .0 | .1  | .0   | .0  | .0   | 1.7  | 1.7          |
|              | TOT %      | 21.6 | 3.1 | .1 | .1 | .3 | .4 | 2.0 | 8.9  | .0  | .3   | 36.8 | 36.8         |
| 10+          | 0-3        | .5   | .1  | .1 | .0 | .2 | .1 | .3  | .6   | .0  | .5   | 2.3  | 2.3          |
|              | 4-10       | 10.4 | 1.8 | .2 | .1 | .2 | .6 | 1.9 | 6.4  | .0  | .0   | 21.3 | 21.3         |
|              | 11-21      | 19.5 | 4.2 | .1 | .0 | .1 | .1 | .2  | 4.2  | .0  | .0   | 28.4 | 28.4         |
|              | 22+        | 1.4  | .4  | .0 | .0 | .0 | .0 | .0  | .1   | .0  | .0   | 1.9  | 1.9          |
|              | TOT %      | 31.8 | 6.5 | .3 | .1 | .4 | .7 | 2.4 | 11.3 | .0  | .5   | 54.0 | 54.0         |
| TOT OBS      |            |      |     |    |    |    |    |     |      |     |      |      | 9879         |
| TOT PCT      |            |      |     |    |    |    |    |     |      |     |      |      | 100.0        |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .2         | .0         | .3         | 1.7        | 3.5          | 4.0          | 1.7          | .4           | .5           | 2.1   | 14.3  | 85.7               | 1499         |
| 06009         | .4         | .3         | .4         | 3.9        | 7.1          | 6.8          | 3.0          | .8           | .8           | 3.9   | 27.6  | 72.4               | 1469         |
| 12015         | .1         | .1         | .4         | 1.7        | 5.8          | 4.3          | 2.1          | .9           | .7           | 3.9   | 19.9  | 80.1               | 1661         |
| 18021         | .2         | .1         | .1         | 1.2        | 4.3          | 4.5          | 1.2          | .7           | .7           | 2.2   | 15.2  | 84.8               | 1523         |
| TOT           | 14         | 7          | 18         | 129        | 319          | 300          | 122          | 44           | 42           | 188   | 1183  | 4969               | 6152         |
| PCT           | .2         | .1         | .3         | 2.1        | 5.2          | 4.9          | 2.0          | .7           | .7           | 3.1   | 19.2  | 80.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | 1.8   | 1.1 | 4.6 | 33.5 | 58.9 | 2258         |
| 06009         | .1   | 2.9   | 1.8 | 4.4 | 37.7 | 53.0 | 2701         |
| 12015         | *    | 1.8   | 1.9 | 6.0 | 36.5 | 53.7 | 2395         |
| 18021         | .1   | 3.0   | 2.1 | 5.1 | 39.5 | 50.2 | 2683         |
| TOT           | 13   | 243   | 175 | 502 | 3709 | 5395 | 10037        |
| PCT           | .1   | 2.4   | 1.7 | 5.0 | 37.0 | 53.8 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH >4/8), BY HOUR

| HOUR<br>(GMT) | <150<br><50' D | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|----------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .1             | .4         | 6.5         | 11.8            | 81.7              | 1452         |
| 06009         | .3             | 1.3        | 9.3         | 21.6            | 69.1              | 1437         |
| 12015         | .1             | .7         | 7.7         | 16.7            | 75.6              | 1617         |
| 18021         | .3             | .5         | 6.3         | 13.0            | 80.8              | 1488         |
| TOT           | 12             | 43         | 446         | 945             | 4603              | 5994         |
| PCT           | .2             | .7         | 7.4         | 13.8            | 76.8              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | *     | *     | .1    | .1    | *     | .0     | 14           | .2          |
| 80/84  | .0   | .0    | *     | .1    | .7    | 2.0   | 1.0   | .1     | 243          | 3.9         |
| 75/79  | .0   | .0    | .0    | .1    | 1.1   | 9.0   | 9.5   | 2.5    | 1374         | 22.1        |
| 70/74  | .0   | .0    | .0    | .0    | .9    | 11.6  | 27.0  | 10.2   | 3091         | 49.8        |
| 65/69  | .0   | .0    | .0    | .0    | .1    | 2.1   | 13.4  | 8.0    | 1461         | 23.5        |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .1    | .2     | 23           | .4          |
| 55/59  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | *      | 1            | *           |
| TOTAL  | 0    | 0     | 2     | 16    | 177   | 1535  | 3169  | 1308   | 6207         | 100.0       |
| PCT    | .0   | .0    | *     | .3    | 2.9   | 24.7  | 51.1  | 21.1   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION, BY TEMP

|       | N    | NE  | E  | SE | S  | SW  | W   | NW   | VAR | CALM |
|-------|------|-----|----|----|----|-----|-----|------|-----|------|
| 85/89 | .1   | *   | .0 | .0 | .0 | .0  | *   | .1   | .0  | .0   |
| 80/84 | 1.6  | .2  | *  | *  | .1 | .2  | .5  | 1.2  | .0  | .1   |
| 75/79 | 10.7 | 1.3 | .2 | *  | .3 | .6  | 2.1 | 6.6  | .0  | .3   |
| 70/74 | 30.8 | 4.2 | .3 | *  | .3 | .6  | 2.1 | 11.2 | .0  | .3   |
| 65/69 | 17.2 | 1.7 | *  | .0 | .1 | .1  | .3  | 4.0  | .0  | .1   |
| 60/64 | .3   | *   | .0 | .0 | .0 | .0  | .0  | .1   | .0  | .0   |
| 55/59 | .0   | .0  | .0 | .0 | *  | .0  | .0  | .0   | .0  | .0   |
| TOTAL | 60.6 | 7.5 | .5 | .1 | .7 | 1.5 | 5.1 | 23.2 | .0  | .8   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 86  | 79  | 77  | 71  | 66 | 65 | 61  | 70.9 | 2806         |
| 06009         | 85  | 79  | 77  | 71  | 66 | 64 | 59  | 70.9 | 3769         |
| 12015         | 88  | 84  | 81  | 73  | 68 | 66 | 58  | 74.0 | 2887         |
| 18021         | 88  | 83  | 80  | 73  | 68 | 66 | 60  | 73.1 | 3729         |
| TOT           | 88  | 82  | 79  | 72  | 67 | 65 | 58  | 72.2 | 13191        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .1    | .8    | 11.0  | 54.2  | 33.8   | 86   | 1540         |
| 06009         | .0   | .1    | 1.0   | 12.4  | 56.1  | 30.4   | 86   | 1578         |
| 12015         | .0   | .9    | 6.0   | 42.9  | 41.5  | 8.7    | 80   | 1624         |
| 18021         | .0   | .1    | 3.4   | 31.2  | 52.6  | 12.8   | 82   | 1585         |
| TOT           | 0    | 19    | 180   | 1555  | 3228  | 1345   | 83   | 6327         |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | TOT   | M<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | *        | .0       | 1     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | *        | *        | *        | .0       | 4     | *        | *         |
| 14/16              | .0       | .0       | .0       | *        | .1       | *        | *        | .0       | 9     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | *        | .1       | .2       | .1       | .0       | 38    | .1       | .5        |
| 9/10               | .0       | .0       | .0       | .1       | .3       | .3       | .2       | *        | 61    | .1       | .8        |
| 7/8                | .0       | .0       | *        | .4       | .5       | .6       | .2       | .1       | 121   | .1       | 1.7       |
| 6                  | .0       | .0       | *        | .2       | .7       | .6       | .1       | .0       | 115   | .2       | 1.5       |
| 5                  | .0       | .0       | .1       | .6       | 1.1      | .8       | .3       | .1       | 195   | .3       | 2.6       |
| 4                  | .0       | .0       | .1       | 1.1      | 1.9      | .7       | .2       | *        | 281   | .2       | 3.8       |
| 3                  | .0       | .0       | .3       | 2.0      | 2.9      | .9       | .2       | .0       | 432   | .5       | 5.8       |
| 2                  | .0       | .0       | 1.3      | 4.0      | 3.6      | 1.1      | .3       | .0       | 712   | .8       | 9.5       |
| 1                  | *        | .2       | 1.9      | 6.8      | 4.9      | 1.4      | .2       | .0       | 1063  | 1.3      | 14.1      |
| 0                  | .0       | .0       | 2.8      | 7.2      | 4.4      | 1.8      | .2       | .0       | 1129  | 1.1      | 15.3      |
| -1                 | .0       | .1       | 3.0      | 6.1      | 4.0      | 1.4      | .1       | .0       | 1012  | 1.1      | 13.6      |
| -2                 | .0       | .1       | 2.3      | 4.1      | 2.8      | .9       | *        | .0       | 708   | .4       | 9.8       |
| -3                 | *        | *        | 1.1      | 2.4      | 1.9      | .4       | *        | .0       | 413   | .2       | 5.8       |
| -4                 | .0       | *        | .7       | 1.6      | 1.1      | .2       | *        | .0       | 256   | .2       | 3.5       |
| -5                 | .0       | .0       | .5       | 1.1      | .8       | .1       | *        | .0       | 172   | .1       | 2.4       |
| -6                 | .0       | .0       | .1       | .4       | .4       | *        | *        | .0       | 62    | *        | .9        |
| -7/-8              | .0       | *        | .2       | .4       | .3       | .1       | .0       | .0       | 72    | *        | 1.0       |
| -9/-10             | .0       | .0       | .1       | .1       | .1       | *        | .0       | .0       | 22    | *        | .3        |
| -11/-13            | .0       | *        | *        | .1       | *        | .0       | .0       | .0       | 7     | .0       | .1        |
| TOTAL              | 2        |          | 1019     |          | 2196     |          | 169      |          | 6885  | 462      | 6423      |
| PCT                | *        | .5       | 14.6     | 38.7     | 31.9     | 11.3     | 2.5      | .3       | 100.0 | 6.7      | 93.3      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      | NE  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .3  | 1.8  | .2    | .0    | .0    | .0  | 2.2  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |  |
| 1-2     | .6  | 8.7  | 6.3   | .0    | .0    | .0  | 15.6 | *   | .9   | .6    | .0    | .0    | .0  | 1.5 |  |
| 3-4     | *   | 6.9  | 16.3  | .4    | .0    | .0  | 23.6 | .0  | .4   | 1.1   | *     | .0    | .0  | 1.6 |  |
| 5-6     | .0  | 1.3  | 10.2  | .9    | *     | .0  | 12.5 | .0  | .1   | .9    | .1    | .0    | .0  | 1.1 |  |
| 7       | .0  | .2   | 4.9   | .9    | .0    | .0  | 6.0  | .0  | *    | .4    | .2    | .0    | .0  | .6  |  |
| 8-9     | .0  | .1   | 1.0   | .6    | *     | .0  | 1.6  | .0  | .0   | .1    | .1    | *     | .0  | .2  |  |
| 10-11   | .0  | *    | .4    | .5    | .0    | .0  | .9   | .0  | .0   | *     | .1    | .0    | .0  | .1  |  |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0   | .0    | *     | *     | .0  | *   |  |
| 17-19   | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | .0    | *     | .0    | .0  | *   |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .9  | 18.9 | 39.3  | 3.4   | *     | .0  | 62.6 | .1  | 1.6  | 3.2   | .4    | *     | .0  | 5.3 |  |

| E       |     |      |       |       |       |     |     | SE  |      |       |       |       |     |     |  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|--|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |  |
| <1      | .1  | .0   | .0    | .0    | .0    | .0  | .1  | *   | *    | .0    | .0    | .0    | .0  | *   |  |
| 1-2     | *   | *    | .1    | .0    | .0    | .0  | .1  | .0  | *    | .0    | .0    | .0    | .0  | *   |  |
| 3-4     | .0  | *    | *     | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 5-6     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 13-16   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 17-19   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |  |
| TOT PCT | .1  | .1   | .1    | *     | *     | .0  | .3  | *   | *    | .0    | .0    | .0    | .0  | .1  |  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .1 | .4  | .0   | .0    | .0    | .0    | .0  | .5  |
| 1-2     | .3  | .3   | .0    | .0    | .0    | .0  | .6  | .2 | .8  | .1   | .0    | .0    | .0    | .0  | 1.1 |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .1  | .0   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | .5   | .1    | .0    | .0    | .0  | .9  | .3 | 1.3 | .1   | .0    | .0    | .0    | .0  | 1.7 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | NW | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|------|------|-------|-------|-------|-----|------|-----------|
| <1      | .2  | 1.3  | .0    | .0    | .0    | .0  | 1.5 | .4 | 1.2  | .0   | .0    | .0    | .0    | .0  | 1.7  |           |
| 1-2     | .2  | 2.2  | .4    | .0    | .0    | .0  | 2.8 | .2 | 6.7  | 1.8  | .0    | .0    | .0    | .0  | 8.7  |           |
| 3-4     | .0  | .5   | .1    | .0    | .0    | .0  | .6  | .0 | 3.5  | 4.1  | .1    | .0    | .0    | .0  | 7.7  |           |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0 | .8   | 2.2  | .1    | .0    | .0    | .0  | 3.1  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .1   | .9   | .1    | .0    | .0    | .0  | 1.1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .1   | .2   | .0    | .0    | .0    | .0  | .3   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0   | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .5  | 4.1  | .6    | .0    | .0    | .0  | 5.2 | .6 | 12.4 | 9.3  | .3    | .0    | .0    | .0  | 22.6 |           |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 3.0 | 5.3  | .2    | .0    | .0    | .0  | 8.5   |         |
| 1-2     | 1.7 | 19.7 | 9.1   | .0    | .0    | .0  | 30.6  |         |
| 3-4     | .1  | 11.3 | 21.4  | .4    | .0    | .0  | 33.2  |         |
| 5-6     | .0  | 2.2  | 13.4  | 1.0   | .1    | .0  | 16.7  |         |
| 7       | .0  | .3   | 6.1   | 1.2   | .0    | .0  | 7.7   |         |
| 8-9     | .0  | .2   | 1.2   | .6    | .0    | .0  | 2.1   |         |
| 10-11   | .0  | .0   | .4    | .6    | .0    | .0  | 1.0   |         |
| 12      | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 4.9 | 39.0 | 51.9  | 4.0   | .1    | .0  | 100.0 | 3752    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.4 | 8.6  | 13.8 | 7.4  | 3.7  | 1.0 | .5    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1738  | 4        |
| 6-7          | .0  | 1.5  | 7.1  | 9.1  | 5.2  | 2.4 | .8    | .3 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1271  | 5        |
| 8-9          | .0  | .5   | 2.1  | 3.6  | 3.1  | 1.6 | .7    | .3 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 572   | 6        |
| 10-11        | .0  | .4   | .4   | 1.2  | 1.2  | .5  | .5    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 203   | 6        |
| 12-13        | .0  | .0   | .6   | .7   | .0   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 75    | 5        |
| >13          | .0  | .0   | .0   | .3   | .3   | .0  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 31    | 6        |
| INDET        | 2.5 | 4.3  | 5.0  | 3.3  | 1.7  | .8  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 834   | 3        |
| TOTAL        | 187 | 727  | 1378 | 1215 | 729  | 301 | 141   | 35 | 29    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4744  | 5        |
| PCT          | 3.9 | 13.3 | 29.0 | 25.6 | 13.4 | 6.3 | 3.0   | .7 | .6    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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14.9N 18.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                      |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|----------------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG WEA |
| N                  | .3   | .1        | .2   | .0        | .0   | .0              | *    | .5              | .1             | .6                      | 3.5         | *                   | 9.7        | 1.8                  | 83.6       |
| NE                 | .5   | .7        | .0   | .0        | .0   | .0              | .0   | 1.7             | .2             | 1.4                     | 5.7         | .0                  | 8.0        | 1.9                  | 81.4       |
| E                  | 5.9  | .0        | .0   | .0        | .0   | .0              | .0   | 5.9             | 2.8            | 5.9                     | 1.4         | .0                  | 4.5        | .0                   | 82.6       |
| SE                 | 6.3  | 1.8       | .0   | .0        | .0   | .0              | .0   | 8.1             | 1.8            | 2.6                     | 3.7         | .0                  | 1.5        | .0                   | 83.5       |
| S                  | .0   | .7        | .0   | .0        | .0   | .0              | .0   | .7              | 2.0            | .0                      | 2.9         | .0                  | 3.8        | 2.7                  | 87.9       |
| SW                 | .0   | .4        | .8   | .0        | .0   | .0              | .0   | 1.2             | .6             | 2.6                     | 4.9         | .0                  | 6.1        | 1.2                  | 83.3       |
| W                  | .1   | .1        | .3   | .0        | .0   | .0              | .0   | .5              | .1             | 1.5                     | 6.1         | .0                  | 8.9        | 2.0                  | 80.8       |
| NW                 | .3   | *         | .1   | .0        | .0   | *               | *    | .5              | .1             | .8                      | 3.2         | *                   | 6.7        | 1.5                  | 87.2       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0                   | .0         |
| CALM               | .8   |           | .8   | .0        | .0   | .0              | .0   | 1.5             | .8             | 3.1                     | 2.3         | .0                  | 15.4       | 2.3                  | 74.6       |
| TOT PCT            | .4   |           | .2   | .0        | .0   | .0              | *    | .8              | .2             | 1.1                     | 3.8         | *                   | 8.3        | 1.7                  | 84.1       |
| TOT OBS:           | 7119 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                                 |               |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|---------------------------------|---------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG DUST<br>BLWG SNOW | NO SIG<br>WEA |
| 00003         | .6                 | .2           | .3   | .0           | .0   | .0                    | .0   | 1.0                     | .1                | 3.4          | 2.6            | .0                        | 6.6           | 1.1                             | 85.5          |
| 06009         | .6                 | .4           | .3   | .0           | .0   | .0                    | .1   | 1.4                     | .3                | 1.2          | 4.7            | .1                        | 6.5           | 1.8                             | 84.2          |
| 12015         | .3                 | .3           | .2   | .0           | .0   | .0                    | .0   | .8                      | .4                | .0           | 3.5            | .1                        | 9.6           | 2.3                             | 83.4          |
| 18021         | .4                 | .1           | .1   | .0           | .0   | .0                    | .0   | .5                      | .3                | .4           | 4.7            | .0                        | 10.4          | 1.5                             | 82.5          |
| TOT PCT       | .5                 | .2           | .2   | .0           | .0   | .0                    | *    | .9                      | .3                | 1.2          | 3.9            | *                         | 8.3           | 1.7                             | 83.9          |
| TOT OBS:      | 7408               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                                 |               |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.5                | 18.5 | 20.0  | 1.9   | *     | .0  |       | 41.8      | 11.6     |          | 40.8       | 43.7  | 39.8  | 40.7  | 42.5  | 42.5  | 44.9  | 41.4  |
| NE       | .5                 | 4.9  | 5.6   | .7    | *     | .0  |       | 11.6      | 11.8     |          | 10.5       | 2.4   | 11.0  | 15.0  | 12.3  | 6.5   | 10.7  | 14.6  |
| E        | .2                 | .9   | .4    | .1    | *     | .0  |       | 1.5       | 10.0     |          | 1.0        | 1.1   | 1.9   | 2.9   | 2.0   | 1.0   | .8    | .9    |
| SE       | .1                 | .6   | .2    | *     | *     | .0  |       | 1.0       | 8.8      |          | 1.0        | .7    | 1.1   | 1.5   | 1.1   | .6    | .7    | .9    |
| S        | .3                 | 1.0  | .3    | *     | .0    | .0  |       | 1.7       | 7.4      |          | 1.9        | .4    | 1.2   | 1.9   | 2.0   | 1.0   | 1.8   | 1.4   |
| SW       | .5                 | 2.7  | .5    | *     | .0    | .0  |       | 3.8       | 7.2      |          | 4.5        | 4.0   | 3.6   | 3.0   | 3.0   | 4.1   | 3.8   | 5.0   |
| W        | .9                 | 7.9  | 1.5   | *     | .0    | .0  |       | 10.4      | 7.6      |          | 10.6       | 10.1  | 11.0  | 9.0   | 9.4   | 12.7  | 10.0  | 12.0  |
| NW       | 1.5                | 16.3 | 8.2   | .3    | .0    | .0  |       | 26.2      | 9.4      |          | 27.5       | 33.5  | 27.5  | 24.1  | 26.0  | 29.9  | 25.6  | 22.6  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 2.0                |      |       |       |       |     |       | 2.0       | .0       |          | 2.2        | 4.0   | 2.8   | 1.8   | 1.5   | 1.7   | 1.8   | 1.2   |
| TOT OBS  | 947                | 6648 | 4610  | 380   | 5     | 0   | 12590 |           | 10.1     |          | 2485       | 174   | 2453  | 1137  | 2577  | 177   | 2425  | 1162  |
| TOT PCT  | 7.5                | 52.8 | 36.6  | 3.0   | *     | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |       | 41+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |  |  |
|----------|------|--------------------|-------|-------|-------|-------|-----------|----------|----------|------------|-------|-------|--|--|
|          |      | 7-16               | 17-27 | 28-40 | 00 03 |       |           |          |          | 06 09      | 12 15 | 18 21 |  |  |
| N        | 7.8  | 25.9               | 8.0   | .2    | .0    |       | 41.8      | 11.6     | 40.9     | 40.1       | 42.5  | 43.8  |  |  |
| NE       | 2.1  | 7.0                | 2.5   | .1    | .0    |       | 11.6      | 11.8     | 10.0     | 12.3       | 11.9  | 11.9  |  |  |
| E        | .5   | .8                 | .2    | *     | .0    |       | 1.5       | 10.0     | 1.1      | 2.2        | 2.0   | .9    |  |  |
| SE       | .5   | .4                 | .1    | *     | .0    |       | 1.0       | 8.8      | 1.0      | 1.3        | 1.1   | .7    |  |  |
| S        | .9   | .7                 | .1    | *     | .0    |       | 1.7       | 7.4      | 1.8      | 1.4        | 2.0   | 1.6   |  |  |
| SW       | 2.0  | 1.7                | .1    | *     | .0    |       | 3.8       | 7.2      | 4.5      | 3.4        | 3.1   | 4.2   |  |  |
| W        | 4.7  | 5.5                | .2    | .0    | .0    |       | 10.4      | 7.6      | 10.6     | 10.4       | 9.7   | 10.7  |  |  |
| NW       | 7.7  | 16.6               | 1.9   | *     | .0    |       | 26.2      | 9.4      | 27.9     | 26.4       | 26.2  | 24.6  |  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0    |       | .0        | .0       | .0       | .0         | .0    | .0    |  |  |
| CALM     | 2.0  |                    |       |       |       |       | 2.0       | .0       | 2.3      | 2.5        | 1.5   | 1.6   |  |  |
| TOT OBS  | 3535 | 7372               | 1637  | 46    | 0     | 12590 |           | 10.1     | 2659     | 3590       | 2754  | 3587  |  |  |
| TOT PCT  | 28.1 | 58.6               | 13.0  | .4    | .0    |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |  |  |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0008 DAKAR  
14.9N 18.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 2.3  | 5.2 | 52.8 | 37.0               | 2.7   | *     | .0  | 10.1 | 100.0    | 2659      |
| 06009 | 2.3  | 6.0 | 54.4 | 34.0               | 3.1   | .1    | .0  | 9.8  | 100.0    | 3590      |
| 12015 | 1.3  | 6.1 | 51.3 | 38.2               | 2.9   | .1    | .0  | 10.2 | 100.0    | 2754      |
| 18021 | 1.6  | 5.0 | 52.4 | 37.9               | 3.3   | .0    | .0  | 10.3 | 100.0    | 3587      |
| TOT   | 250  | 697 | 6648 | 4610               | 380   | 5     | 0   | 10.1 |          | 12590     |
| PCT   | 2.0  | 5.5 | 52.8 | 36.6               | 3.0   | *     | .0  | 10.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 21.7 | 6.2  | 10.5 | 5.1        |              | 3.2                    |
| NE       | 2.7  | 1.4  | 2.0  | 1.0        |              | 3.8                    |
| E        | .2   | .3   | .5   | .4         |              | 5.6                    |
| SE       | .1   | .1   | .4   | .3         |              | 6.0                    |
| S        | .3   | .2   | .5   | .5         |              | 5.3                    |
| SW       | 1.3  | .5   | .9   | .5         |              | 3.8                    |
| W        | 3.5  | 1.9  | 2.8  | 1.6        |              | 4.0                    |
| NW       | 13.6 | 5.2  | 7.6  | 4.2        |              | 3.4                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | .8   | .3   | .6   | .4         |              | 3.9                    |
| TOT OBS  | 2493 | 905  | 1464 | 791        | 5653         | 3.5                    |
| TOT PCT  | 44.1 | 16.0 | 25.9 | 14.0       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT/NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | *          | *          | .2         | 1.0        | 3.1          | 2.5          | 1.1          | .4           | .3           | 1.3   | 33.5               |              |
| NE      | *          | *          | .1         | .4         | .8           | .3           | .3           | .1           | *            | .1    | 4.9                |              |
| E       | *          | .0         | *          | .1         | .2           | .2           | .1           | *            | *            | *     | .7                 |              |
| SE      | .0         | .0         | *          | .1         | .1           | .2           | .0           | *            | *            | *     | .4                 |              |
| S       | *          | .0         | *          | *          | .1           | .2           | *            | .0           | *            | *     | .9                 |              |
| SW      | *          | .0         | *          | .1         | .3           | .3           | *            | *            | .1           | .1    | 2.2                |              |
| W       | *          | .0         | *          | .3         | .8           | .7           | .3           | .1           | .1           | .3    | 7.3                |              |
| NW      | .1         | *          | .1         | .7         | 2.4          | 1.8          | .8           | .2           | .3           | .8    | 23.2               |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | .1         | .0         | .1         | .2         | .1           | *            | *            | .1           | .0           | .1    | 1.5                |              |
| TOT OBS | 19         | 4          | 31         | 163        | 450          | 357          | 145          | 54           | 46           | 167   | 4217               | 5653         |
| TOT PCT | .3         | .1         | .5         | 2.9        | 8.0          | 6.3          | 2.6          | 1.0          | .8           | 3.0   | 74.6               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 2.2       | 3.4  | 3.8  | 3.8  | 3.8  | 3.8  | 3.8   | 3.8  |
| >5000             | 2.8       | 4.4  | 4.8  | 4.8  | 4.8  | 4.8  | 4.8   | 4.8  |
| >3500             | 4.7       | 6.9  | 7.3  | 7.4  | 7.4  | 7.4  | 7.4   | 7.4  |
| >2000             | 9.0       | 12.9 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7  | 13.7 |
| >1000             | 13.8      | 20.3 | 21.4 | 21.5 | 21.5 | 21.5 | 21.5  | 21.5 |
| >600              | 15.3      | 22.9 | 24.3 | 24.3 | 24.3 | 24.3 | 24.4  | 24.4 |
| >300              | 15.5      | 23.3 | 24.8 | 24.9 | 24.9 | 24.9 | 24.9  | 24.9 |
| >150              | 15.5      | 23.4 | 24.9 | 25.0 | 25.0 | 25.0 | 25.0  | 25.0 |
| >0                | 15.6      | 23.6 | 25.1 | 25.2 | 25.3 | 25.3 | 25.3  | 25.3 |
| TOTAL             | 912       | 1379 | 1472 | 1477 | 1478 | 1478 | 1480  | 1480 |

TOTAL NUMBER OF OBS: 5653

PCT FREQ NH <5/8: 74.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL<br>OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-----|--------------|
| 36.3 | 11.4 | 10.8 | 8.9 | 6.8 | 4.9 | 6.5 | 6.0 | 8.2 | .2  | 6116         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

JUNE

AREA 0008 DAKAR  
14.9N 18.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|-----|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0  | *   | .0  | .0  | .0  | .0   | .0   | .0  | .0   | *     |              |
|              | NO PCP | *    | .0  | .0  | .0  | .0  | .0  | *    | .0   | .0  | .0   | *     |              |
|              | TOT %  | *    | .0  | *   | .0  | .0  | .0  | *    | .0   | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   | .0    |              |
|              | NO PCP | .7   | .2  | *   | *   | *   | .1  | .4   | .3   | .0  | *    | 1.7   |              |
|              | TOT %  | .7   | .2  | *   | *   | *   | .1  | .4   | .3   | .0  | *    | 1.7   |              |
| 1<2          | PCP    | .0   | .0  | .0  | *   | .0  | .0  | .0   | .0   | .0  | .0   | *     |              |
|              | NO PCP | .6   | .1  | *   | .0  | *   | *   | .2   | .3   | .0  | *    | 1.3   |              |
|              | TOT %  | .6   | .1  | *   | *   | *   | *   | .2   | .3   | .0  | *    | 1.4   |              |
| 2<5          | PCP    | *    | *   | *   | *   | .0  | .0  | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | 2.0  | .3  | .0  | *   | *   | .1  | .3   | 1.1  | .0  | .2   | 4.2   |              |
|              | TOT %  | 2.0  | .4  | *   | *   | *   | .1  | .3   | 1.1  | .0  | .2   | 4.3   |              |
| 5<10         | PCP    | .1   | .1  | *   | *   | *   | *   | *    | .1   | .0  | *    | .5    |              |
|              | NO PCP | 14.6 | 2.2 | .4  | .3  | .5  | 1.2 | 3.7  | 9.7  | .0  | .5   | 33.1  |              |
|              | TOT %  | 14.8 | 2.3 | .4  | .3  | .5  | 1.2 | 3.7  | 9.8  | .0  | .5   | 33.6  |              |
| 10+          | PCP    | .1   | *   | *   | *   | .0  | *   | *    | .1   | .0  | *    | .3    |              |
|              | NO PCP | 25.2 | 4.4 | 1.0 | .6  | .9  | 2.0 | 5.6  | 18.0 | .0  | 1.0  | 58.8  |              |
|              | TOT %  | 25.3 | 4.5 | 1.0 | .6  | .9  | 2.0 | 5.6  | 18.1 | .0  | 1.1  | 59.0  |              |
| TOT OBS      |        | 7111 |     |     |     |     |     |      |      |     |      |       |              |
| TOT PCT      |        | 43.3 | 7.4 | 1.5 | 1.0 | 1.6 | 3.4 | 10.4 | 29.6 | .0  | 1.8  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E   | SE | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|-----|-----|----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0  | .0  | .0 | .0  | .0  | *    | .0   | .0  | .0   | *     |              |
|              | 4-10       | *    | .0  | .0  | .0 | .0  | .0  | *    | .0   | .0  | .0   | *     |              |
|              | 11-21      | *    | .0  | .0  | .0 | .0  | .0  | *    | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0  | *   | .0 | .0  | .0  | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %      | *    | .0  | *   | .0 | .0  | .0  | *    | *    | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | .0  | *   | *  | *   | *   | *    | *    | .0  | *    | .1    |              |
|              | 4-10       | .3   | .1  | *   | .0 | *   | *   | .2   | .1   | .0  | *    | .8    |              |
|              | 11-21      | .2   | .1  | .0  | .0 | .0  | *   | *    | .1   | .0  | *    | .5    |              |
|              | 22+        | *    | .0  | .0  | .0 | .0  | .0  | .0   | .0   | .0  | *    | *     |              |
|              | TOT %      | .6   | .2  | *   | *  | *   | .1  | .3   | .2   | .0  | *    | 1.4   |              |
| 1<2          | 0-3        | .0   | .0  | .0  | .0 | *   | *   | *    | *    | .0  | *    | .1    |              |
|              | 4-10       | .2   | *   | *   | *  | *   | *   | .1   | .2   | .0  | *    | .6    |              |
|              | 11-21      | .3   | .1  | .0  | .0 | *   | *   | *    | .1   | .0  | *    | .5    |              |
|              | 22+        | .1   | *   | *   | .0 | .0  | .0  | *    | *    | .0  | *    | .1    |              |
|              | TOT %      | .6   | .1  | *   | *  | *   | *   | .2   | .3   | .0  | *    | 1.3   |              |
| 2<5          | 0-3        | .1   | *   | .0  | .0 | *   | *   | .1   | .2   | .0  | .2   | .6    |              |
|              | 4-10       | .6   | .2  | *   | *  | *   | .1  | .4   | .6   | .0  | *    | 2.0   |              |
|              | 11-21      | .9   | .2  | *   | *  | *   | *   | .1   | .3   | .0  | *    | 1.6   |              |
|              | 22+        | .2   | *   | *   | *  | .0  | .0  | .0   | *    | .0  | *    | .3    |              |
|              | TOT %      | 1.8  | .5  | .1  | .1 | *   | .1  | .6   | 1.2  | .0  | .2   | 4.5   |              |
| 5<10         | 0-3        | .5   | .2  | *   | *  | .1  | .1  | .3   | .5   | .0  | .5   | 2.3   |              |
|              | 4-10       | 6.2  | 1.2 | .2  | .2 | .3  | .9  | 2.8  | 5.6  | .0  | *    | 17.5  |              |
|              | 11-21      | 6.9  | 1.4 | .1  | .1 | .1  | .2  | .6   | 2.8  | .0  | *    | 12.2  |              |
|              | 22+        | .7   | .2  | *   | *  | *   | *   | *    | .1   | .0  | *    | 1.1   |              |
|              | TOT %      | 14.4 | 3.0 | .4  | .3 | .5  | 1.2 | 3.7  | 9.0  | .0  | .5   | 33.0  |              |
| 10+          | 0-3        | .9   | .3  | .1  | .1 | .1  | .2  | .6   | .8   | .0  | 1.3  | 4.3   |              |
|              | 4-10       | 10.9 | 2.3 | .6  | .3 | .7  | 1.5 | 4.5  | 10.6 | .0  | *    | 31.4  |              |
|              | 11-21      | 12.6 | 2.9 | .3  | .1 | .2  | .3  | .8   | 5.0  | .0  | *    | 22.8  |              |
|              | 22+        | .8   | .3  | *   | .0 | *   | *   | *    | .1   | .0  | *    | 1.2   |              |
|              | TOT %      | 25.2 | 5.7 | 1.0 | .6 | 1.0 | 2.0 | 5.9  | 17.1 | .0  | 1.3  | 59.8  |              |
| TOT OBS      |            | 9171 |     |     |    |     |     |      |      |     |      |       |              |
| TOT PCT      |            | 42.5 | 9.5 | 1.5 | .9 | 1.6 | 3.4 | 10.7 | 27.7 | .0  | 2.0  | 100.0 |              |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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AREA 0008 DAKAR  
14.9N 18.0W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+      | TOTAL        | NM <5/8<br>ANY HGT | TOTAL<br>DBS  |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|--------------------|---------------|
| 00003          | .3         | .1         | .3         | 2.0        | 5.9          | 5.0          | 2.3          | .1           | .5           | 2.3        | 18.9         | 81.1               | 1464          |
| 06009          | .1         | .1         | .6         | 4.6        | 9.3          | 7.3          | 3.0          | 1.6          | .7           | 3.2        | 30.6         | 69.4               | 1468          |
| 12015          | .4         | .1         | .4         | 2.5        | 7.9          | 6.4          | 2.2          | 1.1          | .9           | 3.1        | 25.0         | 75.0               | 1601          |
| 18021          | .4         | .0         | .7         | 2.1        | 7.5          | 6.0          | 2.4          | 1.0          | .9           | 3.1        | 24.3         | 75.7               | 1495          |
| TOT<br>PCT     | 19<br>.3   | 5<br>.1    | 31<br>.5   | 169<br>2.8 | 460<br>7.6   | 373<br>6.2   | 149<br>2.5   | 57<br>.9     | 48<br>.8     | 177<br>2.9 | 1488<br>24.7 | 4540<br>75.3       | 6028<br>100.0 |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2    | 1/2<1      | 1<2        | 2<3        | 3<10         | 10+          | TOTAL<br>DBS  |
|----------------|---------|------------|------------|------------|--------------|--------------|---------------|
| 00003          | *       | 1.1        | .8         | 4.0        | 30.5         | 63.6         | 2162          |
| 06009          | .1      | 1.5        | 1.1        | 4.3        | 35.3         | 57.7         | 2532          |
| 12015          | .2      | .8         | 1.3        | 5.7        | 31.8         | 60.2         | 2242          |
| 18021          | .1      | 1.9        | 1.7        | 4.5        | 34.5         | 57.4         | 2527          |
| TOT<br>PCT     | 9<br>.1 | 128<br>1.4 | 118<br>1.2 | 435<br>4.6 | 3136<br>33.1 | 5637<br>59.6 | 9463<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>DBS  |
|----------------|--------------|------------|-------------|-----------------|-------------------|---------------|
| 00003          | .4           | .8         | 5.9         | 15.6            | 78.5              | 1428          |
| 06009          | .1           | 1.0        | 10.2        | 24.2            | 65.6              | 1428          |
| 12015          | .4           | .9         | 8.8         | 21.0            | 70.2              | 1549          |
| 18021          | .3           | 1.2        | 7.6         | 20.4            | 72.0              | 1448          |
| TOT<br>PCT     | 18<br>.3     | 56<br>1.0  | 477<br>8.1  | 1189<br>20.3    | 4187<br>71.5      | 5853<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>DBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | *     | *     | .0    | .0    | .0     | 3            | .1          |
| 85/89  | .0   | .0    | .0    | *     | .4    | .6    | .1    | .0     | 64           | 1.1         |
| 80/84  | .0   | .0    | *     | .1    | 1.2   | 8.6   | 7.3   | 1.0    | 1090         | 18.2        |
| 75/79  | .0   | .0    | .0    | .1    | .6    | 11.9  | 23.2  | 9.7    | 2485         | 41.5        |
| 70/74  | .0   | .0    | .0    | .2    | 4.8   | 19.9  | 9.2   | 2038   | 34.0         | 58.5        |
| 65/69  | .0   | .0    | .0    | .0    | .3    | 3.2   | 1.7   | 310    | 5.2          | 9.0         |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | .1    | 3      | .1           | 0.5         |
| TOT    | 0    | 0     | 1     | 11    | 144   | 1564  | 3219  | 1054   | 5993         | 100.0       |
| PCT    | .0   | .0    | *     | .2    | 2.4   | 26.1  | 53.7  | 17.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE  | E   | SE | S   | SW  | W    | NW   | VAR | CALM |
|------|-----|-----|----|-----|-----|------|------|-----|------|
| *    | .0  | .0  | .0 | .0  | .0  | *    | *    | .0  | *    |
| .4   | *   | .1  | *  | .1  | .1  | .2   | .2   | .0  | .1   |
| 5.0  | .9  | .5  | .2 | .7  | 1.3 | 3.4  | 5.8  | .0  | .5   |
| 16.1 | 2.6 | .7  | .4 | .5  | 1.2 | 5.3  | 13.8 | .0  | .9   |
| 18.9 | 3.0 | .2  | .1 | .1  | .5  | 1.6  | 9.3  | .0  | .4   |
| 3.6  | .4  | *   | .0 | *   | *   | 1.1  | .0   | *   | *    |
| *    | *   | .0  | .0 | .0  | .0  | *    | .0   | .0  | .0   |
| 43.9 | 7.0 | 1.4 | .8 | 1.4 | 3.1 | 10.5 | 30.2 | .0  | 1.8  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>DBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 86  | 82  | 81  | 74  | 69 | 67 | 63  | 74.6 | 2733         |
| 06009          | 90  | 82  | 80  | 74  | 68 | 66 | 63  | 74.5 | 3664         |
| 12015          | 91  | 86  | 84  | 77  | 71 | 69 | 65  | 77.4 | 2758         |
| 18021          | 91  | 85  | 83  | 77  | 70 | 68 | 64  | 76.6 | 3603         |
| TOT            | 91  | 85  | 82  | 76  | 69 | 67 | 63  | 75.8 | 12758        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>DBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .0    | .6    | 12.6  | 60.6  | 26.2   | 86   | 1520         |
| 06009          | .0   | .1    | .5    | 14.7  | 59.0  | 25.7   | 85   | 1569         |
| 12015          | .0   | .4    | 5.5   | 42.4  | 43.1  | 8.7    | 80   | 1577         |
| 18021          | .0   | .3    | 3.0   | 33.3  | 52.9  | 10.5   | 82   | 1574         |
| TOT            | 0    | 12    | 150   | 1615  | 3358  | 1105   | 83   | 6240         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | M<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | *        | *        | 6     | *        | .1        |
| 11/13              | .0       | .0       | .0       | *        | .1       | .2       | .1       | *        | 27    | *        | .4        |
| 9/10               | .0       | .0       | .0       | .1       | .4       | .2       | *        | .0       | 43    | .1       | .6        |
| 7/8                | .0       | .0       | .1       | .2       | .5       | .6       | .1       | *        | 107   | .1       | 1.5       |
| 6                  | .0       | .0       | .1       | .3       | .5       | .2       | .1       | .0       | 79    | .1       | 1.1       |
| 5                  | .0       | *        | .2       | .7       | .9       | .6       | .2       | .0       | 165   | .2       | 2.3       |
| 4                  | .0       | .1       | .4       | 1.0      | .7       | .4       | .1       | .0       | 180   | .2       | 2.6       |
| 3                  | .0       | .1       | .5       | 1.6      | 1.6      | .8       | .2       | .0       | 310   | .2       | 4.6       |
| 2                  | .0       | .1       | 1.0      | 2.3      | 1.4      | 1.0      | .2       | .0       | 390   | .3       | 5.6       |
| 1                  | .0       | .2       | 1.9      | 3.7      | 2.6      | 1.6      | .1       | .0       | 658   | .5       | 9.5       |
| 0                  | *        | .3       | 2.7      | 4.8      | 4.8      | 2.0      | .0       | .0       | 957   | .8       | 13.8      |
| -1                 | .0       | .5       | 3.6      | 5.5      | 5.8      | 1.8      | *        | .0       | 1123  | .9       | 16.3      |
| -2                 | *        | .5       | 3.1      | 4.6      | 4.9      | 1.1      | *        | .0       | 938   | .4       | 13.9      |
| -3                 | *        | .3       | 2.2      | 3.6      | 3.9      | .8       | .0       | .0       | 710   | .3       | 10.5      |
| -4                 | *        | .2       | 1.3      | 2.0      | 2.1      | .3       | .0       | .0       | 380   | .1       | 5.7       |
| -5                 | .0       | .2       | .9       | 1.4      | 1.2      | .2       | .0       | .0       | 259   | .1       | 3.7       |
| -6                 | .0       | *        | .5       | .7       | .3       | *        | .0       | .0       | 102   | *        | 1.5       |
| -7/-8              | .0       | .1       | .3       | .5       | .4       | .0       | .0       | .0       | 91    | *        | 1.4       |
| -9/-10             | .0       | *        | .2       | .2       | .1       | .0       | .0       | .0       | 38    | *        | .6        |
| -11/-13            | .0       | *        | *        | *        | .0       | .0       | .0       | .0       | 5     | .0       | .1        |
| TOTAL              | 4        | 1233     | 2188     | 2111     | 772      | 5        | 6562     | 278      | 6284  |          |           |
| PCT                | .1       | 2.7      | 18.6     | 39.3     | 32.2     | 11.8     | 1.1      | .1       | 100.0 | 4.2      | 95.8      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .9  | 2.4  | .1    | .0    | .0    | .0  | 3.4  | .2  | .3   | .1    | .0    | .0    | .0  | .6  |
| 1-2     | .5  | 9.3  | 4.4   | .0    | .0    | .0  | 14.2 | .1  | 1.1  | .7    | .0    | .0    | .0  | 2.0 |
| 3-4     | *   | 5.6  | 9.7   | .2    | .0    | .0  | 15.6 | .0  | .8   | 1.4   | *     | .0    | .0  | 2.2 |
| 5-6     | .0  | 1.0  | 5.5   | .5    | .0    | .0  | 7.1  | .0  | .2   | .7    | .1    | .0    | .0  | .9  |
| 7       | .0  | .1   | 2.8   | .8    | .0    | .0  | 3.7  | .0  | .0   | .3    | .1    | .0    | .0  | .4  |
| 8-9     | .0  | .1   | .5    | .3    | .0    | .0  | .8   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .2    | .3    | .0    | .0  | .5   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 1.4 | 18.5 | 23.3  | 2.1   | .0    | .0  | 45.3 | .3  | 2.5  | 3.2   | .2    | .0    | .0  | 6.1 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .1  | .1   | .0    | .0    | .0    | .0  | .2  | *   | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | *   | .4   | .1    | .0    | .0    | .0  | .5  | *   | .3   | .1    | .0    | .0    | .0  | .5  |
| 3-4     | .0  | .3   | .2    | *     | .0    | .0  | .5  | .0  | .1   | .1    | *     | .0    | .0  | .2  |
| 5-6     | .0  | .1   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .8   | .3    | *     | .0    | .0  | 1.3 | .1  | .5   | .3    | *     | .0    | .0  | .9  |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .4  | .1  | .7   | .0    | .0    | .0    | .0  | .8  |
| 1-2     | .0  | .5   | .2    | .0    | .0    | .0  | .6  | .2  | 1.4  | .1    | .0    | .0    | .0  | 1.7 |
| 3-4     | .0  | .2   | .2    | .0    | .0    | .0  | .4  | .0  | .3   | .2    | .0    | .0    | .0  | .5  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .9   | .4    | .0    | .0    | .0  | 1.4 | .2  | 2.4  | .4    | .0    | .0    | .0  | 3.1 |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |      | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |           |
| <1      | .5  | 1.2  | .0    | .0    | .0    | .0  | 1.7 | .7  | 2.2  | .1    | .0    | .0    | .0  | 2.9  |           |
| 1-2     | .3  | 4.4  | .5    | .0    | .0    | .0  | 5.3 | .4  | 10.2 | 2.4   | .0    | .0    | .0  | 13.0 |           |
| 3-4     | .0  | 1.4  | .6    | .0    | .0    | .0  | 2.0 | .0  | 3.9  | 5.8   | .1    | .0    | .0  | 9.7  |           |
| 5-6     | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0  | .9   | 2.6   | .1    | .0    | .0  | 3.5  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .6    | .1    | .0    | .0  | .7   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .9  | 7.1  | 1.4   | .0    | .0    | .0  | 9.4 | 1.1 | 17.2 | 11.4  | .3    | .0    | .0  | 30.0 |           |

|      |
|------|
| 97.5 |
|------|

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.3 | 7.3  | .3    | .0    | .0    | .0  | 13.9  |         |
| 1-2     | 2.0 | 27.3 | 8.2   | .0    | .0    | .0  | 37.6  |         |
| 3-4     | .1  | 12.3 | 17.5  | .4    | .0    | .0  | 30.3  |         |
| 5-6     | .0  | 2.2  | 9.0   | .7    | .0    | .0  | 11.9  |         |
| 7       | .0  | .1   | 3.7   | 1.0   | .0    | .0  | 4.8   |         |
| 8-9     | .0  | .1   | .7    | .3    | .0    | .0  | 1.0   |         |
| 10-11   | .0  | .0   | .3    | .3    | .0    | .0  | .6    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.4 | 49.3 | 39.7  | 2.6   | .0    | .0  | 100.0 | 3762    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.9 | 9.1  | 13.1 | 8.0  | 3.2  | .8  | .3    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1732  | 4        |
| 6-7          | .0  | 1.6  | 7.2  | 9.9  | 4.7  | 1.9 | 1.1   | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1267  | 5        |
| 8-9          | .0  | .0   | 2.1  | 3.7  | 2.7  | 1.1 | .7    | .3 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 540   | 6        |
| 10-11        | .0  | .0   | .6   | .6   | .8   | 1.1 | .3    | .4 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 177   | 6        |
| 12-13        | .0  | .0   | .7   | .5   | .1   | .2  | .2    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 75    | 5        |
| >13          | .0  | .0   | .0   | .6   | .3   | .0  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 50    | 6        |
| INDET        | 3.6 | 4.8  | 4.8  | 2.8  | 2.2  | .6  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 893   | 3        |
| TOTAL        | 258 | 794  | 1345 | 1246 | 674  | 236 | 131   | 30 | 19    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4734  | 4        |
| PCT          | 5.4 | 16.8 | 28.4 | 26.3 | 14.2 | 5.0 | 2.8   | .6 | .4    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1957-1973

JULY

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | MAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | 1.2                | .8        | .3   | .0        | .0   | .0              | .0   | 2.3                     | .9             | 2.0       | 1.5         | .0                  | 5.0        | .5              | 88.0       |
| NE       | 3.1                | .7        | 1.0  | .0        | .0   | .0              | .2   | 4.7                     | 1.6            | 1.8       | 1.4         | .0                  | 5.1        | .7              | 85.3       |
| E        | 5.9                | 4.2       | 2.0  | .0        | .0   | .0              | .0   | 12.1                    | 1.2            | 3.0       | 1.8         | .0                  | 3.0        | .8              | 79.6       |
| SE       | 8.9                | 5.1       | 1.6  | .0        | .0   | .0              | .0   | 15.5                    | 2.9            | 5.1       | 2.2         | .0                  | 1.1        | .0              | 74.3       |
| S        | 5.1                | 4.8       | 1.1  | .0        | .0   | .0              | .0   | 11.0                    | 3.3            | 2.9       | .7          | .2                  | 2.8        | .3              | 79.3       |
| SW       | 5.6                | 3.8       | .8   | .0        | .0   | .0              | .0   | 10.2                    | 3.2            | 3.6       | 2.0         | *                   | 1.8        | .2              | 79.3       |
| W        | 2.3                | 2.5       | .5   | .0        | .0   | .0              | .0   | 5.3                     | 1.9            | 3.0       | 2.2         | .0                  | 4.2        | .9              | 82.7       |
| NW       | 1.2                | .9        | .4   | .0        | .0   | .0              | .0   | 2.5                     | 1.1            | 2.4       | 2.4         | .0                  | 4.3        | .2              | 87.4       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | 1.8                | 1.8       | .6   | .0        | .0   | .0              | .0   | 4.1                     | 1.8            | 2.9       | 2.3         | .0                  | 5.8        | .0              | 83.6       |
| TUT PCT  | 2.4                | 1.8       | .5   | .0        | .0   | .0              | *    | 4.7                     | 1.6            | 2.6       | 1.9         | *                   | 4.1        | .4              | 84.8       |
| TOT OBS: | 7247               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHMR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | MAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG MO PCPN | FOG MO PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | 3.2                | 1.1       | .7   | .0        | .0   | .0              | .1   | 5.0                     | 1.6            | 6.0       | 1.5         | .1                  | 3.8        | .2              | 82.6       |
| 06009      | 3.7                | 3.0       | .6   | .0        | .0   | .0              | .0   | 7.2                     | 2.2            | 4.0       | 2.1         | .0                  | 2.9        | .4              | 81.9       |
| 12015      | 2.0                | 1.8       | .5   | .0        | .0   | .0              | .0   | 4.3                     | 1.3            | .3        | 1.5         | .0                  | 5.2        | .7              | 86.8       |
| 18021      | 1.5                | 1.7       | .4   | .0        | .0   | .0              | .0   | 3.6                     | 1.4            | .8        | 2.6         | .0                  | 4.7        | .5              | 86.6       |
| TUT PCT    | 2.6                | 1.9       | .6   | .0        | .0   | .0              | *    | 5.0                     | 1.6            | 2.7       | 1.9         | *                   | 4.1        | .5              | 84.5       |
| TOT OBS:   | 7640               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00    |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 2.1                | 14.9 | 7.6   | .5    | *     | .0  | 25.1  | 9.3       | 22.4     | 17.1     | 24.2       | 26.7  | 28.1  | 26.0  | 25.6  | 25.1  |    |
| NE       | .9                 | 5.4  | 2.4   | .1    | .0    | .0  | 8.8   | 8.9       | 7.7      | 4.7      | 7.6        | 11.2  | 10.0  | 3.8   | 8.7   | 10.6  |    |
| E        | .3                 | 1.2  | .4    | .1    | *     | .0  | 2.1   | 8.2       | 1.2      | 1.2      | 2.2        | 3.1   | 2.7   | .6    | 1.8   | 1.9   |    |
| SE       | .3                 | 1.2  | .3    | *     | .0    | .0  | 1.8   | 7.2       | 1.8      | 1.6      | 1.6        | 2.5   | 2.1   | 1.8   | 1.6   | 1.2   |    |
| S        | .8                 | 3.2  | .9    | .1    | *     | .0  | 5.0   | 7.7       | 5.6      | 3.9      | 4.3        | 4.3   | 4.6   | 5.0   | 5.9   | 4.7   |    |
| SW       | 1.1                | 6.7  | 1.9   | *     | .0    | .0  | 9.7   | 7.8       | 11.7     | 12.1     | 9.1        | 7.6   | 8.3   | 6.4   | 10.3  | 11.1  |    |
| W        | 1.5                | 12.4 | 3.8   | .1    | .0    | .0  | 17.8  | 8.2       | 20.1     | 22.8     | 19.9       | 15.3  | 15.0  | 20.8  | 17.7  | 16.5  |    |
| NW       | 1.7                | 17.1 | 7.5   | .3    | *     | .0  | 26.6  | 9.1       | 26.2     | 33.5     | 27.6       | 25.9  | 26.3  | 34.3  | 26.2  | 25.6  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0    | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 3.1                |      |       |       |       |     | 3.1   | .0        | 3.4      | 3.1      | 3.6        | 3.4   | 2.9   | 1.3   | 2.2   | 3.3   |    |
| TOT OBS  | 1444               | 7658 | 3044  | 155   | 3     | 0   | 12304 |           | 2441     | 161      | 2467       | 1059  | 2506  | 156   | 2429  | 1085  |    |
| TOT PCT  | 11.7               | 62.2 | 24.7  | 1.3   | *     | .0  |       | 100.0     | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |          | 41+   | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |          |          |  |
|----------|------|--------------------|-------|-------|----------|-------|--------------|-------------|-------------|------------|----------|----------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00<br>03 |       |              |             |             | 06<br>09   | 12<br>15 | 18<br>21 |  |
| N        | 8.0  | 14.8               | 2.2   | *     | .0       |       | 25.1         | 9.3         | 22.1        | 24.9       | 28.0     | 25.4     |  |
| NE       | 3.3  | 4.7                | .8    | *     | .0       |       | 8.8          | 8.9         | 7.5         | 8.7        | 9.7      | 9.3      |  |
| E        | 1.1  | .8                 | .2    | *     | .0       |       | 2.1          | 8.2         | 1.2         | 2.5        | 2.6      | 1.8      |  |
| SE       | .9   | .8                 | .1    | .0    | .0       |       | 1.7          | 7.2         | 1.8         | 1.9        | 2.0      | 1.5      |  |
| S        | 2.4  | 2.3                | .2    | *     | .0       |       | 5.0          | 7.7         | 5.5         | 4.3        | 4.7      | 5.5      |  |
| SW       | 4.4  | 4.9                | .4    | *     | .0       |       | 9.7          | 7.8         | 11.7        | 8.7        | 8.2      | 10.5     |  |
| W        | 7.0  | 10.1               | .7    | *     | .0       |       | 17.8         | 8.2         | 20.3        | 18.5       | 15.3     | 17.3     |  |
| NW       | 8.4  | 16.3               | 1.9   | *     | .0       |       | 26.6         | 9.1         | 26.6        | 27.1       | 26.7     | 26.0     |  |
| VAR      | .0   | .0                 | .0    | .0    | .0       |       | .0           | .0          | .0          | .0         | .0       | .0       |  |
| CALM     | 3.1  |                    |       |       |          |       | 3.1          | .0          | 3.4         | 3.5        | 2.8      | 2.6      |  |
| TOT OBS  | 4757 | 6736               | 793   | 18    | 0        | 12304 |              | 8.5         | 2602        | 3526       | 2662     | 3514     |  |
| TOT PCT  | 38.7 | 54.7               | 6.4   | .1    | .0       |       | 100.0        |             | 100.0       | 100.0      | 100.0    | 100.0    |  |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973

JULY

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10 | WIND SPEED (KNOTS) |       |       |  | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|------|------|--------------------|-------|-------|--|-----|------|----------|-----------|
|       |      |      |      | 11-21              | 22-33 | 34-47 |  |     |      |          |           |
| 00003 | 3.4  | 8.2  | 64.0 | 23.3               | 1.1   | *     |  | .0  | 8.4  | 100.0    | 2602      |
| 06009 | 3.5  | 8.8  | 62.4 | 24.0               | 1.3   | *     |  | .0  | 8.3  | 100.0    | 3526      |
| 12015 | 2.8  | 8.4  | 60.4 | 27.3               | 1.1   | .0    |  | .0  | 8.6  | 100.0    | 2662      |
| 18021 | 2.6  | 9.1  | 62.2 | 24.6               | 1.5   | *     |  | .0  | 8.5  | 100.0    | 3514      |
| TOT   | 377  | 1067 | 7658 | 3044               | 155   | 3     |  | 0   | 8.5  |          | 12304     |
| PCT   | 3.1  | 8.7  | 62.2 | 24.7               | 1.3   | *     |  | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS/D | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
| N        | 7.1  | 4.6  | 8.1  | 4.9          |              | 4.4                    |
| NE       | 1.2  | 1.1  | 2.1  | 1.5          |              | 5.0                    |
| E        | .3   | .3   | .6   | .6           |              | 5.4                    |
| SE       | .2   | .2   | .5   | .4           |              | 5.6                    |
| S        | .9   | 1.2  | 1.7  | 1.2          |              | 5.0                    |
| SW       | 2.3  | 1.6  | 3.3  | 2.2          |              | 4.9                    |
| W        | 4.4  | 3.2  | 6.8  | 5.0          |              | 5.0                    |
| NW       | 7.3  | 5.7  | 10.8 | 6.3          |              | 4.7                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | .6   | .6   | 1.0  | .4           |              | 4.6                    |
| TOT OBS  | 1362 | 1034 | 1967 | 1265         | 5628         | 4.8                    |
| TOT PCT  | 24.2 | 18.4 | 35.0 | 22.5         | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .1         | .0         | .1         | 1.4        | 3.1          | 2.1          | 1.0          | .4           | .2           | .5    | 15.7               |              |
| NE      | *          | .0         | .1         | .3         | 1.0          | .7           | .2           | .1           | .1           | *     | 3.4                |              |
| E       | .0         | .0         | *          | .2         | .3           | .2           | *            | *            | *            | *     | .9                 |              |
| SE      | *          | .0         | *          | .1         | .2           | .1           | *            | *            | *            | *     | .7                 |              |
| S       | *          | *          | .1         | .3         | 1.0          | .3           | .1           | *            | .0           | *     | 3.2                |              |
| SW      | *          | *          | .2         | .6         | 1.3          | .7           | .5           | .2           | .1           | .2    | 5.7                |              |
| W       | *          | .0         | .2         | 1.5        | 2.7          | 1.9          | .7           | .2           | .2           | .4    | 11.5               |              |
| NW      | .1         | *          | .2         | 1.4        | 5.1          | 2.6          | 1.0          | .4           | .3           | .6    | 18.4               |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | *          | .0         | *          | .2         | .3           | .2           | *            | *            | *            | *     | 1.7                |              |
| TOT OBS | 15         | 3          | 55         | 341        | 841          | 498          | 201          | 74           | 49           | 102   | 3449               | 5628         |
| TOT PCT | .3         | .1         | 1.0        | 6.1        | 14.9         | 8.8          | 3.6          | 1.3          | .9           | 1.8   | 61.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.7         | 2.6        | 2.7        | 2.7        | 2.7          | 2.7          | 2.7           | 2.7        |
| = OR >5000        | 2.6         | 3.9        | 4.0        | 4.0        | 4.0          | 4.0          | 4.0           | 4.0        |
| = OR >3500        | 5.2         | 7.3        | 7.5        | 7.5        | 7.5          | 7.5          | 7.5           | 7.5        |
| = OR >2000        | 11.2        | 15.6       | 16.2       | 16.2       | 16.2         | 16.2         | 16.2          | 16.2       |
| = OR >1000        | 21.6        | 29.9       | 31.0       | 31.1       | 31.1         | 31.1         | 31.1          | 31.1       |
| = OR >600         | 25.9        | 35.7       | 37.0       | 37.1       | 37.1         | 37.1         | 37.1          | 37.1       |
| = OR >300         | 26.3        | 36.5       | 37.9       | 38.1       | 38.1         | 38.1         | 38.1          | 38.1       |
| = OR >150         | 26.3        | 36.5       | 38.0       | 38.1       | 38.2         | 38.2         | 38.2          | 38.2       |
| = OR >0           | 26.4        | 36.7       | 38.3       | 38.4       | 38.5         | 38.5         | 38.5          | 38.5       |
| TOTAL             | 1551        | 2157       | 2250       | 2258       | 2260         | 2261         | 2262          | 2262       |

TOTAL NUMBER OF OBS: 5876

PCT FREQ NH <5/8: 61.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1   | 2    | 3    | 4    | 5   | 6   | 7   | 8    | 9  | TOTAL<br>OBS |
|--|------|-----|------|------|------|-----|-----|-----|------|----|--------------|
|  | 16.7 | 9.9 | 11.8 | 12.1 | 10.2 | 6.5 | 8.9 | 8.7 | 15.0 | .2 | 6203         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1897-1973

JULY

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|-----|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0  | .0  | .0  | *   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .0  | .0  | .0  | .0  | .0   | *    | *    | .0  | .0   | *     |              |
|              | TOT %  | .0   | .0  | .0  | .0  | .0  | *    | *    | *    | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | *    | *   | *   | .0  | .0  | *    | *    | .0   | .0  | .0   | *     |              |
|              | NO PCP | .1   | *   | *   | *   | *   | .1   | .2   | .2   | .0  | .0   | .8    |              |
|              | TOT %  | .1   | *   | *   | *   | *   | .1   | .2   | .2   | .0  | .0   | .8    |              |
| 1<2          | PCP    | *    | *   | *   | .0  | *   | *    | *    | *    | .0  | .0   | .1    |              |
|              | NO PCP | .2   | *   | *   | .0  | *   | *    | .1   | .2   | .0  | .1   | .7    |              |
|              | TOT %  | .2   | *   | *   | .0  | *   | .1   | .1   | .2   | .0  | .1   | .8    |              |
| 2<5          | PCP    | .1   | *   | *   | *   | *   | .1   | .1   | .1   | .0  | *    | .5    |              |
|              | NO PCP | .5   | .2  | *   | *   | .1  | .2   | .4   | .5   | .0  | .1   | 2.0   |              |
|              | TOT %  | .6   | .3  | .1  | *   | .1  | .3   | .5   | .6   | .0  | .1   | 2.5   |              |
| 5<10         | PCP    | .2   | .2  | .1  | .1  | .2  | .6   | .6   | .4   | .0  | *    | 2.5   |              |
|              | NO PCP | 7.1  | 1.5 | .4  | .3  | 1.3 | 2.6  | 4.7  | 7.7  | .0  | .6   | 26.2  |              |
|              | TOT %  | 7.4  | 1.6 | .5  | .5  | 1.5 | 3.2  | 5.2  | 8.1  | .0  | .6   | 28.7  |              |
| 10+          | PCP    | .2   | .1  | *   | .1  | .3  | .3   | .3   | .2   | .0  | .1   | 1.6   |              |
|              | NO PCP | 15.9 | 4.0 | 1.0 | .9  | 3.5 | 6.1  | 12.8 | 19.8 | .0  | 1.5  | 65.6  |              |
|              | TOT %  | 16.1 | 4.1 | 1.1 | 1.0 | 3.8 | 6.4  | 13.1 | 20.0 | .0  | 1.6  | 67.2  |              |
| TOT OBS      |        |      |     |     |     |     |      |      |      |     |      |       | 7246         |
| TOT PCT      |        | 24.4 | 6.0 | 1.7 | 1.6 | 5.5 | 10.0 | 19.2 | 29.2 | .0  | 2.4  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|-----|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .0  | *    | *     |              |
|              | 4-10       | .0   | .0  | .0  | .0  | *   | *   | *    | *    | .0  |      | .1    |              |
|              | 11-21      | .0   | .0  | *   | *   | .0  | *   | .0   | .0   | .0  |      | *     |              |
|              | 22+        | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .0  |      | .0    |              |
|              | TOT %      | .0   | .0  | *   | *   | *   | *   | *    | *    | .0  | *    | .1    |              |
|              |            |      |     |     |     |     |     |      |      |     |      |       |              |
| 1/2<1        | 0-3        | *    | .0  | .0  | .0  | .0  | *   | .0   | *    | .0  | .0   | .1    |              |
|              | 4-10       | .1   | *   | .0  | *   | *   | *   | .1   | .1   | .0  |      | .4    |              |
|              | 11-21      | *    | *   | *   | *   | .0  | *   | *    | .1   | .0  |      | .2    |              |
|              | 22+        | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0   | .0  |      | .0    |              |
|              | TOT %      | .1   | *   | *   | *   | *   | .1  | .1   | .2   | .0  | .0   | .6    |              |
|              |            |      |     |     |     |     |     |      |      |     |      |       |              |
| 1<2          | 0-3        | *    | .0  | .0  | .0  | .0  | *   | *    | *    | .0  | *    | .1    |              |
|              | 4-10       | .1   | *   | *   | .0  | *   | *   | .1   | .1   | .0  |      | .4    |              |
|              | 11-21      | .1   | *   | .0  | .0  | *   | *   | *    | .1   | .0  |      | .2    |              |
|              | 22+        | .0   | .0  | *   | .0  | .0  | .0  | .0   | .0   | .0  |      | *     |              |
|              | TOT %      | .2   | .1  | *   | .0  | *   | .1  | .1   | .2   | .0  | *    | .8    |              |
|              |            |      |     |     |     |     |     |      |      |     |      |       |              |
| 2<5          | 0-3        | *    | *   | .0  | *   | *   | *   | .1   | *    | .0  | .1   | .3    |              |
|              | 4-10       | .3   | .2  | *   | *   | .1  | .2  | .4   | .4   | .0  |      | 1.6   |              |
|              | 11-21      | .3   | .1  | *   | *   | *   | .1  | .1   | .2   | .0  |      | .8    |              |
|              | 22+        | *    | *   | .1  | .0  | .0  | *   | *    | *    | .0  |      | .1    |              |
|              | TOT %      | .7   | .3  | .1  | *   | .1  | .3  | .5   | .6   | .0  | .1   | 2.8   |              |
|              |            |      |     |     |     |     |     |      |      |     |      |       |              |
| 5<10         | 0-3        | .5   | .2  | .1  | .1  | .2  | .3  | .4   | .4   | .0  | .7   | 2.9   |              |
|              | 4-10       | 3.7  | 1.2 | .4  | .3  | .8  | 2.0 | 3.0  | 4.6  | .0  |      | 15.9  |              |
|              | 11-21      | 2.6  | .6  | .1  | .1  | .3  | .6  | 1.3  | 2.4  | .0  |      | 8.0   |              |
|              | 22+        | .2   | *   | *   | .0  | *   | *   | .1   | .1   | .0  |      | .5    |              |
|              | TOT %      | 7.0  | 2.0 | .6  | .5  | 1.4 | 2.9 | 4.7  | 7.5  | .0  | .7   | 27.3  |              |
|              |            |      |     |     |     |     |     |      |      |     |      |       |              |
| 10+          | 0-3        | 1.3  | .6  | .1  | .2  | .5  | .8  | 1.0  | 1.2  | .0  | 1.8  | 7.5   |              |
|              | 4-10       | 10.5 | 3.2 | .7  | .8  | 2.4 | 4.6 | 9.2  | 13.2 | .0  |      | 44.6  |              |
|              | 11-21      | 4.7  | 1.3 | .2  | .7  | 1.2 | 2.6 | 5.1  | 5.1  | .0  |      | 15.9  |              |
|              | 22+        | .1   | *   | *   | *   | *   | *   | .1   | .1   | .0  |      | .4    |              |
|              | TOT %      | 16.7 | 5.0 | 1.1 | 1.2 | 3.5 | 6.6 | 12.9 | 19.6 | .0  | 1.8  | 68.4  |              |
|              |            |      |     |     |     |     |     |      |      |     |      |       |              |
| TOT OBS      |            |      |     |     |     |     |     |      |      |     |      |       | 9366         |
| TOT PCT      |            | 24.6 | 7.5 | 1.9 | 1.7 | 5.1 | 9.9 | 18.4 | 28.2 | .0  | 2.7  | 100.0 |              |

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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973AREA 0008 DAKAR  
14.9N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 5500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .3         | .1         | 1.0        | 5.5        | 13.4         | 6.6          | 3.4          | 1.3          | .9           | 1.3   | 33.7  | 66.3               | 1428         |
| 06009          | .8         | .1         | 1.1        | 7.0        | 18.5         | 8.8          | 3.4          | 1.2          | 1.0          | 1.7   | 43.6  | 56.4               | 1493         |
| 12015          | .1         | .0         | 1.1        | 6.0        | 13.2         | 10.4         | 3.0          | 1.3          | .9           | 2.1   | 38.1  | 61.9               | 1610         |
| 18021          | .0         | .0         | .7         | 5.1        | 13.0         | 8.0          | 4.0          | 1.3          | .6           | 1.9   | 34.7  | 65.3               | 1497         |
| TOT            | 18         | 4          | 58         | 355        | 874          | 514          | 208          | 77           | 51           | 105   | 2264  | 3764               | 6028         |
| PCT            | .3         | .1         | 1.0        | 5.9        | 14.5         | 8.5          | 3.5          | 1.3          | .8           | 1.7   | 37.6  | 62.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | *    | .9    | .5  | 2.6 | 25.6 | 70.3 | 2190         |
| 06009          | .2   | .6    | 1.1 | 2.6 | 30.4 | 65.1 | 2668         |
| 12015          | .1   | .4    | .7  | 2.9 | 25.4 | 70.4 | 2276         |
| 18021          | *    | .7    | .8  | 3.1 | 28.2 | 67.2 | 2628         |
| TOT            | 9    | 63    | 78  | 274 | 2691 | 6647 | 9762         |
| PCT            | .1   | .6    | .8  | 2.8 | 27.6 | 68.1 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .3            | 1.5        | 9.0         | 26.5            | 64.5              | 1392         |
| 06009          | .8            | 2.1        | 11.4        | 34.4            | 54.2              | 1455         |
| 12015          | .1            | 1.3        | 10.1        | 30.2            | 59.7              | 1572         |
| 18021          | .0            | .8         | 8.6         | 28.5            | 62.9              | 1457         |
| TOT            | 18            | 83         | 575         | 1759            | 3542              | 5876         |
| PCT            | .3            | 1.4        | 9.8         | 29.9            | 60.3              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | *     | .0    | .1    | .0    | .0     | 5            | .1          |
| 85/89  | .0   | .0    | .0    | *     | .4    | 1.1   | .4    | *      | 120          | 2.0         |
| 80/84  | .0   | .0    | *     | *     | 1.3   | 17.9  | 17.4  | 2.0    | 2368         | 38.8        |
| 75/79  | .0   | .0    | *     | *     | .6    | 13.6  | 24.8  | 7.8    | 2979         | 48.9        |
| 70/74  | .0   | .0    | .0    | .0    | *     | 1.4   | 6.1   | 2.7    | 622          | 10.2        |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .0    | *     | *      | 2            | *           |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | *     | *      | 1            | *           |
| TOTAL  | 0    | 0     | 2     | 7     | 133   | 2073  | 3093  | 769    | 6097         | 100.0       |
| PCT    | .0   | .0    | *     | .1    | 2.5   | 34.0  | 50.7  | 12.6   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM |
|-------|------|-----|-----|-----|-----|------|------|------|-----|------|
| 90/94 | *    | *   | *   | .0  | .0  | .0   | *    | *    | .0  | .0   |
| 85/89 | .4   | .1  | .1  | *   | .2  | .2   | .4   | .5   | .0  | .1   |
| 80/84 | 7.1  | 1.8 | .8  | .6  | 3.1 | 5.0  | 8.8  | 10.4 | .0  | 1.1  |
| 75/79 | 12.6 | 3.0 | .7  | .7  | 1.9 | 4.5  | 9.7  | 14.8 | .0  | 1.0  |
| 70/74 | 4.2  | 1.3 | .1  | .1  | .1  | .3   | .9   | 3.1  | .0  | .1   |
| 65/69 | *    | .0  | .0  | .0  | .0  | .0   | *    | .0   | .0  | .0   |
| 60/64 | .0   | .0  | .0  | .0  | *   | *    | .0   | .0   | .0  | .0   |
| TOTAL | 24.4 | 6.2 | 1.7 | 1.4 | 5.3 | 10.0 | 19.8 | 28.9 | .0  | 2.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 88  | 82  | 81  | 78  | 73 | 71 | 64  | 77.6 | 2692         |
| 06009          | 87  | 83  | 81  | 78  | 72 | 70 | 67  | 77.4 | 3650         |
| 12015          | 92  | 87  | 85  | 80  | 75 | 73 | 70  | 79.9 | 2716         |
| 18021          | 94  | 86  | 84  | 80  | 74 | 72 | 67  | 79.2 | 3548         |
| TOT            | 94  | 86  | 83  | 79  | 73 | 71 | 64  | 78.5 | 12606        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .1    | .8    | 23.3  | 58.6  | 17.2   | 84   | 1561         |
| 06009          | .0   | .1    | .8    | 21.6  | 60.2  | 17.3   | 84   | 1663         |
| 12015          | .0   | .1    | 5.8   | 47.5  | 39.1  | 7.4    | 79   | 1590         |
| 18021          | .0   | .2    | 2.9   | 43.5  | 43.6  | 9.7    | 81   | 1612         |
| TOT            | 0    | 9     | 166   | 2180  | 3241  | 830    | 82   | 6426         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1857-1973

JULY

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 17/19              | .0       | .0       | .0       | .0       | *        | *        | .0       | .0       | .0  | 2     | *        | *         |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0  | 3     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *   | 9     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | *        | .1       | .1       | *        | *        | .0  | 18    | *        | .2        |
| 7/8                | .0       | .0       | .0       | *        | .2       | .3       | .1       | .1       | .0  | 49    | .0       | .7        |
| 6                  | .0       | .0       | .0       | .1       | .1       | .2       | .1       | *        | .0  | 33    | *        | .5        |
| 5                  | .0       | .0       | .0       | .2       | .2       | .4       | .4       | .0       | .0  | 84    | .1       | 1.2       |
| 4                  | .0       | .0       | *        | .1       | .4       | .6       | .3       | .0       | .0  | 101   | *        | 1.5       |
| 3                  | .0       | .0       | *        | .1       | .8       | 1.0      | .4       | .0       | .0  | 157   | *        | 2.2       |
| 2                  | .0       | .0       | *        | .4       | 1.3      | 1.9      | .4       | .0       | .0  | 271   | *        | 3.9       |
| 1                  | .0       | .0       | .1       | 1.3      | 2.9      | 2.8      | .2       | .0       | .0  | 504   | .2       | 7.2       |
| 0                  | .0       | .0       | .2       | 2.9      | 5.3      | 5.3      | .1       | .0       | .0  | 944   | .3       | 13.5      |
| -1                 | .0       | .0       | .3       | 3.6      | 8.8      | 6.6      | .1       | .0       | .0  | 1328  | .5       | 18.9      |
| -2                 | .0       | .0       | .5       | 3.4      | 10.1     | 3.8      | *        | .0       | .0  | 1212  | .4       | 17.3      |
| -3                 | .0       | .0       | .3       | 3.1      | 8.7      | 1.7      | .0       | .0       | .0  | 949   | .3       | 13.6      |
| -4                 | *        | *        | .1       | 2.0      | 4.7      | .8       | .0       | .0       | .0  | 526   | .2       | 7.5       |
| -5                 | .0       | *        | .1       | 1.8      | 3.0      | .2       | .0       | .0       | .0  | 357   | *        | 5.2       |
| -6                 | .0       | .0       | .1       | 1.2      | .8       | *        | .0       | .0       | .0  | 146   | *        | 2.1       |
| -7/-8              | .0       | .0       | .1       | .9       | .7       | .1       | .0       | .0       | .0  | 121   | *        | 1.8       |
| -9/-10             | .0       | .0       | *        | .2       | .2       | .0       | .0       | .0       | .0  | 27    | .0       | .4        |
| -11/-13            | .0       | *        | *        | .1       | *        | .0       | .0       | .0       | .0  | 17    | .0       | .2        |
| TOTAL              | 1        |          | 137      |          | 3318     |          | 147      |          | 1   | 683   | 147      | 6706      |
| PCT                | *        | *        | 2.0      | 21.3     | 48.4     | 25.9     | 2.1      | .2       | *   | 100.0 | 2.1      | 97.9      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
| <1      | .8  | 1.8  | .2    | .0    | .0    | .0  | 2.9  | .2  | .5   | .0    | .0    | .0    | .0  | .7  |
| 1-2     | .6  | 8.2  | 2.1   | .0    | .0    | .0  | 10.9 | .2  | 1.9  | .4    | .0    | .0    | .0  | 2.5 |
| 3-4     | .1  | 3.7  | 3.3   | .1    | .0    | .0  | 7.1  | .1  | .8   | .6    | .0    | .0    | .0  | 1.4 |
| 5-6     | *   | .7   | 1.8   | .1    | *     | .0  | 2.7  | .1  | .1   | .2    | .0    | .0    | .0  | .4  |
| 7       | .0  | .1   | .8    | *     | .0    | .0  | .9   | .0  | .1   | .1    | *     | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | *     | *     | .0    | .0  | .1   | .0  | .0   | .1    | *     | .0    | .0  | .1  |
| 12      | .0  | *    | *     | *     | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | *    | .0    | *     | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 1.5 | 14.6 | 8.3   | .4    | *     | .0  | 24.8 | .6  | 3.2  | 1.4   | *     | .0    | .0  | 5.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .1   | .0    | .0    | .0    | .0  | .3  | .1  | .2   | *     | .0    | .0    | .0  | .3  |
| 1-2     | .1  | .5   | .1    | .0    | .0    | .0  | .6  | .0  | .4   | *     | .0    | .0    | .0  | .4  |
| 3-4     | .0  | .1   | .1    | *     | .0    | .0  | .2  | .0  | .2   | .1    | .0    | .0    | .0  | .3  |
| 5-6     | .0  | .0   | .1    | *     | .0    | .0  | .1  | .0  | .1   | *     | .0    | .0    | .0  | .1  |
| 7       | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | *    | .0    | *     | .0    | .0  | *   |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | .7   | .3    | .1    | .0    | .0  | 1.3 | .1  | .9   | .1    | *     | .0    | .0  | 1.2 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

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PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |     |
| <1      | .2  | .5   | *     | .0    | .0    | .0  | .7  | .6  | .9   | .1    | .0    | .0    | .0  | .0  | 1.5 |
| 1-2     | .2  | 1.7  | .2    | .0    | .0    | .0  | 2.1 | .5  | 3.9  | .5    | .0    | .0    | .0  | .0  | 4.9 |
| 3-4     | *   | .8   | .6    | .1    | .0    | .0  | 1.5 | *   | 1.2  | .8    | .0    | .0    | .0  | .0  | 2.0 |
| 5-6     | *   | .1   | .1    | .0    | .0    | .0  | .2  | .0  | *    | .5    | *     | .0    | .0  | .0  | .6  |
| 7       | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | *    | .1    | *     | .0    | .0  | .0  | .2  |
| 8-9     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .0    | .0    | .0    | .0  | .0  | *   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  |
| TOT PCT | .4  | 3.1  | 1.1   | .1    | .0    | .0  | 4.7 | 1.0 | 6.2  | 2.0   | *     | .0    | .0  | .0  | 9.2 |

| HGT     | W   |      |       |       |       |     |      | NW  |      |       |       |       |     |     | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|------|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |      |           |
| <1      | .7  | 1.9  | *     | .0    | .0    | .0  | 2.6  | .7  | 2.7  | .1    | .0    | .0    | .0  | .0  | 3.5  |           |
| 1-2     | .6  | 8.9  | 1.2   | .0    | .0    | .0  | 10.7 | .5  | 12.0 | 2.3   | .0    | .0    | .0  | .0  | 14.9 |           |
| 3-4     | .1  | 2.9  | 1.4   | *     | .0    | .0  | 4.4  | .1  | 5.0  | 3.8   | .2    | .0    | .0  | .0  | 9.1  |           |
| 5-6     | .0  | .2   | 1.3   | .1    | .0    | .0  | 1.6  | *   | .7   | 1.8   | .2    | *     | .0  | .0  | 2.8  |           |
| 7       | .0  | .1   | .3    | *     | .0    | .0  | .4   | .0  | *    | .6    | *     | .0    | .0  | .0  | .6   |           |
| 8-9     | .0  | *    | *     | .0    | .0    | .0  | .1   | .0  | .0   | .1    | .1    | .0    | .0  | .0  | .2   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0   |           |
| TOT PCT | 1.3 | 14.0 | 4.3   | .1    | .0    | .0  | 19.7 | 1.4 | 20.5 | 8.7   | .4    | *     | .0  | .0  | 31.0 | 97.3      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 7.5  | 8.8  | .5    | .0    | .0    | .0  | 16.7  |         |
| 1-2     | 3.0  | 36.9 | 6.6   | .0    | .0    | .0  | 46.4  |         |
| 3-4     | .3   | 14.4 | 10.3  | .3    | .0    | .0  | 25.5  |         |
| 5-6     | .1   | 1.9  | 5.7   | .4    | *     | .0  | 8.2   |         |
| 7       | .0   | .3   | 1.9   | .2    | .0    | .0  | 2.4   |         |
| 8-9     | .0   | *    | .3    | .1    | .0    | .0  | .4    |         |
| 10-11   | *    | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 12      | .0   | .1   | *     | *     | .0    | .0  | .1    |         |
| 13-16   | .0   | *    | .0    | *     | .0    | .0  | .1    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 10.9 | 62.4 | 25.5  | 1.1   | *     | .0  | 100.0 | 3819    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.0 | 12.7 | 13.4 | 6.3  | 1.7  | .3  | .1    | .1 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1747  | 3        |
| 6-7          | *   | 2.0  | 9.4  | 10.1 | 4.4  | .9  | .6    | .2 | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1314  | 5        |
| 8-9          | .0  | .5   | 2.4  | 3.5  | 2.4  | 1.2 | .4    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 503   | 6        |
| 10-11        | .0  | .6   | 1.0  | 1.1  | .7   | .3  | .1    | *  | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 187   | 5        |
| 12-13        | .0  | .0   | 1.0  | .6   | .3   | .2  | *     | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 101   | 5        |
| >13          | .0  | .0   | .0   | .6   | .2   | .1  | *     | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 45    | 6        |
| INDET        | 3.4 | 5.5  | 4.8  | 2.2  | 1.6  | .3  | .2    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 849   | 3        |
| TOTAL        | 258 | 1014 | 1519 | 1137 | 598  | 195 | 70    | 21 | 12    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4745  | 4        |
| PCT          | 5.4 | 21.4 | 32.0 | 24.4 | 11.3 | 3.3 | 1.5   | .4 | .3    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |  |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|--|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME | PCPN PAST HOUR | THDR LTNG               | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |  |
|                    |      |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |
| N                  | 1.9  | 1.2       | .3   | .0        | .0   | .0              | .1   | 3.5             | 1.2            | 2.9                     | 1.1         | .0                  | 3.9        | .1              | 87.9       |  |
| NE                 | 3.7  | 1.3       | .4   | .0        | .0   | .0              | .2   | 5.5             | 1.0            | 5.3                     | 2.2         | .0                  | 4.6        | .9              | 81.8       |  |
| E                  | 6.7  | 6.7       | .4   | .0        | .0   | .0              | .0   | 13.8            | 7.6            | 7.7                     | .9          | .0                  | 2.1        | 1.0             | 68.3       |  |
| SE                 | 7.2  | 4.4       | .7   | .0        | .0   | .0              | .0   | 12.3            | 4.4            | 4.4                     | 1.7         | .0                  | .7         | .6              | 76.4       |  |
| S                  | 4.7  | 4.1       | .6   | .0        | .0   | .0              | .0   | 9.5             | 4.6            | 4.2                     | 1.3         | .0                  | .9         | .3              | 80.1       |  |
| SW                 | 4.1  | 5.5       | 1.3  | .0        | .0   | .0              | .0   | 10.8            | 6.9            | 2.4                     | .9          | .0                  | .3         | .0              | 79.0       |  |
| W                  | 3.0  | 5.0       | .6   | .0        | .0   | .0              | .0   | 8.5             | 4.0            | 3.0                     | 1.1         | .0                  | 1.0        | .0              | 82.5       |  |
| NW                 | 2.1  | 2.2       | .3   | .0        | .0   | .0              | .0   | 4.6             | 1.6            | 2.7                     | 1.5         | .0                  | 1.5        | .3              | 88.2       |  |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |  |
| CALM               | 2.4  | .5        | .5   | .0        | .0   | .0              | .5   | 3.9             | 3.9            | 3.9                     | .5          | .0                  | 4.4        | 1.5             | 83.4       |  |
| TOT PCT            | 3.1  | 3.2       | .5   | .0        | .0   | .0              | .1   | 6.8             | 3.2            | 3.3                     | 1.2         | .0                  | 2.0        | .3              | 83.7       |  |
| TOT OBS:           | 6942 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |  |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                |                           |               |                       |              |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|----------------|---------------------------|---------------|-----------------------|--------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>DB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FOG WD<br>PCPN | FOG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | 3.3                | 3.2          | .7   | .0           | .0   | .0                    | .1   | 7.2                     | 3.4               | 6.4          | 1.2            | .0                        | 1.9           | .2                    |              | 80.5             |
| 06009         | 4.7                | 3.9          | .4   | .0           | .0   | .0                    | .1   | 9.1                     | 2.9               | 5.5          | 1.7            | .0                        | 1.6           | .4                    |              | 79.9             |
| 12015         | 2.2                | 2.4          | .3   | .0           | .0   | .0                    | .1   | 5.0                     | 4.2               | .4           | .8             | .0                        | 2.2           | .3                    |              | 87.2             |
| 18021         | 2.7                | 3.3          | .8   | .0           | .0   | .0                    | .0   | 6.7                     | 2.3               | 1.1          | 1.7            | .0                        | 2.3           | .1                    |              | 86.0             |
| TOT PCT       | 3.2                | 3.2          | .5   | .0           | .0   | .0                    | .1   | 7.0                     | 3.2               | 3.3          | 1.4            | .0                        | 2.0           | .3                    |              | 83.4             |
| TOT OBS:      | 7349               |              |      |              |      |                       |      |                         |                   |              |                |                           |               |                       |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |    |       | 48+  | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|----|-------|------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 00 | 03    |      |              |             |             | 06         | 09    | 12    | 15    | 18    | 21    |
| N        | 2.2                | 13.4 | 5.8   | .3    | .0    | .0 |       | 21.7 | 8.8          | 19.8        | 18.1        | 19.8       | 23.6  | 23.6  | 26.1  | 23.5  | 20.7  |
| NE       | .7                 | 5.5  | 2.4   | .1    | .0    | .0 |       | 8.7  | 8.9          | 7.7         | 6.4         | 8.1        | 11.3  | 10.5  | 6.1   | 7.1   | 9.2   |
| E        | .4                 | 1.7  | .6    | .1    | .0    | .0 |       | 2.8  | 8.7          | 2.7         | .0          | 2.5        | 3.6   | 4.2   | 1.4   | 2.6   | 2.1   |
| SE       | .3                 | 1.7  | .6    | .1    | *     | .0 |       | 2.7  | 8.4          | 2.0         | .7          | 2.5        | 2.8   | 4.0   | 4.3   | 2.5   | 2.5   |
| S        | 1.2                | 4.8  | 2.1   | .2    | *     | .0 |       | 8.4  | 8.6          | 8.7         | 6.0         | 7.2        | 6.6   | 8.4   | 10.4  | 9.8   | 9.1   |
| SW       | 1.4                | 8.6  | 4.2   | .4    | .1    | .0 |       | 14.7 | 9.3          | 16.7        | 13.3        | 15.3       | 12.7  | 12.1  | 13.0  | 15.0  | 16.2  |
| W        | 1.3                | 11.4 | 4.5   | .2    | *     | .0 |       | 17.4 | 8.7          | 18.7        | 23.4        | 18.1       | 15.7  | 15.4  | 18.8  | 17.4  | 18.7  |
| NW       | 1.4                | 13.0 | 5.9   | .2    | .0    | .0 |       | 20.5 | 9.1          | 19.8        | 25.0        | 23.1       | 20.4  | 19.5  | 17.3  | 19.9  | 19.5  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0 |       | .0   | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |
| CALM     | 3.1                |      |       |       |       |    |       | 3.1  | .0           | 4.2         | 7.0         | 3.6        | 3.2   | 2.4   | 2.8   | 2.3   | 2.0   |
| TOT OBS  | 1492               | 7446 | 3229  | 209   | 13    | 0  | 12389 |      | 8.6          | 2474        | 171         | 2439       | 1117  | 2482  | 181   | 2352  | 1173  |
| TOT PCT  | 12.0               | 60.1 | 26.1  | 1.7   | .1    | .0 | 100.0 |      |              | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 09    | 18 |
| N        | 7.9                | 12.2 | 1.6   | .0    | .0  | 21.7      | 8.8      | 19.7     | 21.0       | 23.7  | 22.6  |    |
| NE       | 3.2                | 4.7  | .7    | .0    | .0  | 8.7       | 8.9      | 7.7      | 9.1        | 10.2  | 7.8   |    |
| E        | 1.4                | 1.1  | .3    | .1    | .0  | 2.8       | 8.7      | 2.1      | 2.8        | 4.0   | 2.4   |    |
| SE       | 1.2                | 1.3  | .2    | .0    | .0  | 2.7       | 8.4      | 1.9      | 2.6        | 4.0   | 2.5   |    |
| S        | 3.7                | 4.0  | .7    | .1    | .0  | 8.4       | 8.6      | 8.6      | 7.0        | 8.6   | 9.5   |    |
| SW       | 5.3                | 8.0  | 1.2   | .1    | .0  | 14.7      | 9.3      | 16.5     | 14.5       | 12.1  | 15.4  |    |
| W        | 6.5                | 9.8  | 1.1   | .0    | .0  | 17.4      | 8.7      | 19.0     | 17.3       | 15.6  | 17.8  |    |
| NW       | 6.7                | 12.3 | 1.4   | .0    | .0  | 20.5      | 9.1      | 20.2     | 22.3       | 19.4  | 19.8  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       | .0       | .0         | .0    | .0    |    |
| CALM     | 3.1                |      |       |       |     | 3.1       | .0       | 4.4      | 3.5        | 2.4   | 2.2   |    |
| TOT OBS  | 4838               | 6611 | 895   | 45    | 0   | 12389     |          | 2645     | 3556       | 2663  | 3525  |    |
| TOT PCT  | 39.1               | 53.4 | 7.2   | .4    | .0  | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3  | 4-10 | WIND SPEED (KNOTS) |       |       | 4R+ | MEAN | PCT FREQ | TOTAL OBS |
|-------|------|------|------|--------------------|-------|-------|-----|------|----------|-----------|
|       |      |      |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 00003 | 4.4  | 7.8  | 61.1 | 25.1               | 1.5   | .1    | .0  | 8.4  | 100.0    | 2645      |
| 06009 | 3.5  | 9.2  | 60.5 | 25.2               | 1.6   | .1    | .0  | 8.5  | 100.0    | 3556      |
| 12015 | 2.4  | 9.5  | 58.1 | 28.0               | 2.0   | *     | .0  | 8.9  | 100.0    | 2663      |
| 18021 | 2.2  | 9.2  | 60.5 | 26.2               | 1.7   | .2    | .0  | 8.7  | 100.0    | 3525      |
| TOT   | 382  | 1110 | 7446 | 3229               | 209   | 13    | 0   | 8.6  |          | 12389     |
| PCT   | 3.1  | 9.0  | 60.1 | 26.1               | 1.7   | .1    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS CD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|---------------|--------------|------------------------|
| N        | 6.3  | 5.1  | 7.8  | 4.2           |              | 4.4                    |
| NE       | 1.6  | 1.2  | 2.4  | 1.4           |              | 4.8                    |
| E        | .4   | .3   | 1.1  | .5            |              | 5.3                    |
| SE       | .4   | .3   | .9   | .6            |              | 5.4                    |
| S        | 1.7  | 1.6  | 3.4  | 1.7           |              | 5.0                    |
| SW       | 2.2  | 2.4  | 5.5  | 3.3           |              | 5.3                    |
| W        | 3.6  | 3.7  | 6.7  | 3.9           |              | 4.9                    |
| NW       | 5.7  | 4.7  | 7.5  | 4.6           |              | 4.6                    |
| VAR      | .0   | .0   | .0   | .0            |              | 4.0                    |
| CALM     | 1.2  | .6   | 1.1  | .5            |              | 4.0                    |
| TOT OBS  | 1293 | 1073 | 1949 | 1111          | 5366         | 4.8                    |
| TOT PCT  | 23.0 | 20.0 | 36.3 | 20.7          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH > 4/8)  
AND OCCURRENCE OF NH < 5/8 BY WIND DIRECTION

| 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>UBS |
|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| .1         | *          | .1         | 1.0        | 3.0          | 1.8          | .7           | .4           | .3           | .5    | 15.6               |              |
| *          | .0         | *          | .3         | 1.0          | .7           | .3           | .1           | .1           | .1    | 3.9                |              |
| .0         | *          | .1         | .4         | .2           | .2           | .1           | .0           | .1           | .1    | 1.2                |              |
| *          | .0         | *          | .4         | .2           | .1           | .1           | .0           | *            | *     | 1.2                |              |
| *          | *          | .1         | .5         | 1.1          | .8           | .2           | .1           | .1           | *     | 5.5                |              |
| .1         | *          | .2         | .9         | 2.0          | 1.3          | .5           | .2           | .1           | .1    | 7.9                |              |
| *          | *          | .3         | 1.2        | 2.2          | 1.6          | .6           | .2           | .2           | .3    | 11.1               |              |
| *          | .0         | .1         | 1.1        | 3.0          | 2.2          | .7           | .2           | .2           | .3    | 14.7               |              |
| .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| *          | .0         | *          | .2         | .2           | .3           | *            | .0           | .0           | .1    | 2.5                |              |
| 15         | 5          | 47         | 292        | 721          | 492          | 180          | 74           | 46           | 82    | 3412               |              |
| .3         | .1         | .9         | 5.4        | 13.4         | 9.2          | 3.4          | 1.4          | .9           | 1.5   | 63.6               |              |
|            |            |            |            |              |              |              |              |              |       | 100.0              |              |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH > 4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 1.8         | 2.4        | 2.4        | 2.4        | 2.4          | 2.4          | 2.4           | 2.4        |
| = OR >5000        | 3.0         | 3.7        | 3.8        | 3.8        | 3.8          | 3.8          | 3.8           | 3.8        |
| = OR >3500        | 5.5         | 6.9        | 7.1        | 7.1        | 7.1          | 7.1          | 7.1           | 7.1        |
| = OR >2000        | 12.4        | 15.8       | 16.2       | 16.2       | 16.2         | 16.2         | 16.2          | 16.2       |
| = OR >1000        | 22.3        | 28.4       | 29.5       | 29.6       | 29.6         | 29.6         | 29.6          | 29.6       |
| = OR >600         | 26.1        | 33.5       | 34.8       | 34.9       | 34.9         | 34.9         | 35.0          | 35.0       |
| = OR >300         | 26.5        | 34.2       | 35.7       | 35.8       | 35.8         | 35.8         | 35.8          | 35.8       |
| = OR >150         | 26.0        | 34.2       | 35.7       | 35.9       | 35.9         | 35.9         | 35.9          | 35.9       |
| = OR >0           | 26.7        | 34.4       | 36.0       | 36.1       | 36.1         | 36.2         | 36.2          | 36.2       |
| TOTAL             | 1506        | 1942       | 2031       | 2037       | 2038         | 2040         | 2042          | 2042       |

TOTAL NUMBER OF OBS: 5642

PCT FREQ NH < 5/8: 63.8

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4    | 5   | 6   | 7   | 8    | OBS CD | TOTAL<br>OBS |
|------|------|------|------|------|-----|-----|-----|------|--------|--------------|
| 12.9 | 10.6 | 14.6 | 14.0 | 10.7 | 7.7 | 8.3 | 7.7 | 13.3 | .2     | 6001         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|-----|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0  | *   | *   | *   | *    | *    | *    | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .0  | .0  | .0  | *   | *    | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %  | .0   | .0  | *   | *   | *   | *    | .0   | .0   | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | .0   | .0  | *   | *   | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | NO PCP | .1   | .1  | .0  | *   | *   | *    | .1   | .2   | .0  | .0   | .6    |              |
|              | TOT %  | .1   | .1  | *   | *   | *   | *    | .1   | .2   | .0  | .0   | .7    |              |
| 1<2          | PCP    | *    | *   | *   | .0  | *   | *    | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .1   | .1  | .0  | .0  | *   | *    | *    | .0   | .0  | *    | .3    |              |
|              | TOT %  | .1   | .1  | *   | .0  | *   | .1   | .1   | *    | .0  | *    | .4    |              |
| 2<5          | PCP    | *    | *   | *   | .1  | .1  | .2   | .2   | .1   | .0  | *    | .8    |              |
|              | NO PCP | .4   | .1  | .1  | *   | .1  | .1   | .2   | .2   | .0  | *    | 1.3   |              |
|              | TOT %  | .4   | .1  | .1  | .1  | .3  | .3   | .4   | .3   | .0  | .1   | 2.0   |              |
| 5<10         | PCP    | .5   | .2  | .2  | .1  | .4  | .9   | .9   | .7   | .0  | *    | 4.0   |              |
|              | NO PCP | 5.0  | 2.1 | .4  | .7  | 1.8 | 2.8  | 3.9  | 4.8  | .0  | .6   | 22.0  |              |
|              | TOT %  | 5.5  | 2.3 | .6  | .8  | 2.2 | 3.7  | 4.8  | 5.5  | .0  | .6   | 26.0  |              |
| 10+          | PCP    | .3   | .1  | .1  | .1  | .3  | .4   | .4   | .2   | .0  | *    | 1.9   |              |
|              | NO PCP | 15.9 | 4.3 | 1.6 | 1.5 | 5.9 | 9.3  | 12.6 | 15.5 | .0  | 2.2  | 68.9  |              |
|              | TOT %  | 16.2 | 4.4 | 1.7 | 1.6 | 6.2 | 9.7  | 13.0 | 15.8 | .0  | 2.2  | 70.8  |              |
| TOT OBS      |        |      |     |     |     |     |      |      |      |     |      |       | 6936         |
| TOT PCT      |        | 22.3 | 7.0 | 2.4 | 2.5 | 8.7 | 13.8 | 18.4 | 21.8 | .0  | 2.9  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|-----|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | 4-10       | *    | .0  | .0  | .0  | .0  | *    | .0   | *    | .0  | .0   | *     |              |
|              | 11-21      | .0   | .0  | .0  | .0  | *   | *    | *    | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0  | *   | *   | *   | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %      | *    | .0  | *   | *   | *   | *    | *    | *    | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | *   | .0  | *   | *   | .0   | *    | *    | .0  | .0   | .1    |              |
|              | 4-10       | *    | *   | .0  | *   | *   | .1   | *    | .2   | .0  | .0   | .3    |              |
|              | 11-21      | *    | *   | *   | *   | *   | *    | *    | *    | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .1  | *   | *   | *   | .1   | .2   | .0   | .0  | .0   | .6    |              |
| 1<2          | 0-3        | *    | *   | .0  | .0  | .0  | .0   | .0   | .0   | .0  | *    | .1    |              |
|              | 4-10       | .1   | *   | *   | .0  | *   | *    | *    | *    | .0  | .0   | .2    |              |
|              | 11-21      | *    | .1  | .0  | .0  | *   | *    | .1   | *    | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0  | .0  | .0  | .0  | *    | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %      | .1   | .1  | *   | .0  | .1  | .1   | .1   | *    | .0  | *    | .5    |              |
| 2<5          | 0-3        | .1   | *   | *   | .0  | *   | *    | .0   | *    | .0  | .1   | .3    |              |
|              | 4-10       | .3   | .1  | *   | *   | .1  | .2   | .3   | .2   | .0  | .0   | 1.3   |              |
|              | 11-21      | .1   | .1  | *   | .1  | .1  | .2   | .2   | .1   | .0  | .0   | .9    |              |
|              | 22+        | *    | .0  | *   | .0  | *   | *    | *    | *    | .0  | .0   | .2    |              |
|              | TOT %      | .5   | .2  | .1  | .1  | .3  | .4   | .5   | .4   | .0  | .1   | 2.6   |              |
| 5<10         | 0-3        | .4   | .2  | .1  | .1  | .3  | .2   | .3   | .4   | .0  | .7   | 2.8   |              |
|              | 4-10       | 3.2  | 1.3 | .4  | .5  | 1.1 | 2.0  | 2.9  | 3.2  | .0  | .0   | 14.7  |              |
|              | 11-21      | 1.6  | .9  | .2  | .2  | .6  | 1.3  | 1.3  | 1.4  | .0  | .0   | 7.4   |              |
|              | 22+        | .1   | .1  | .1  | *   | .1  | .1   | .1   | .1   | .0  | .0   | .6    |              |
|              | TOT %      | 5.4  | 2.4 | .7  | .8  | 2.1 | 3.7  | 4.5  | 5.1  | .0  | .7   | 25.5  |              |
| 10+          | 0-3        | 1.6  | .4  | .2  | .2  | .8  | .9   | 1.0  | 1.0  | .0  | 2.2  | 8.2   |              |
|              | 4-10       | 10.1 | 3.5 | 1.0 | 1.2 | 3.6 | 6.2  | 8.0  | 9.6  | .0  | .0   | 43.2  |              |
|              | 11-21      | 4.6  | 1.3 | .4  | .3  | 1.4 | 2.8  | 3.2  | 4.6  | .0  | .0   | 18.6  |              |
|              | 22+        | .2   | .1  | .1  | *   | *   | .2   | .1   | .1   | .0  | .0   | .7    |              |
|              | TOT %      | 16.4 | 5.2 | 1.7 | 1.8 | 5.8 | 10.0 | 12.3 | 15.3 | .0  | 2.2  | 70.7  |              |
| TOT OBS      |            |      |     |     |     |     |      |      |      |     |      |       | 9080         |
| TOT PCT      |            | 22.5 | 8.1 | 2.6 | 2.8 | 8.3 | 14.2 | 17.5 | 21.0 | .0  | 3.1  | 100.0 |              |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973

AUGUST

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .4         | .1         | 1.1        | 4.8        | 12.1         | 6.8          | 2.9          | .9           | .4           | 1.1   | 30.5  | 69.5               | 1388         |
| 06009         | .4         | .1         | .4         | 7.1        | 13.2         | 10.0         | 3.3          | 1.3          | .6           | 1.8   | 38.2  | 61.8               | 1412         |
| 12015         | .1         | .1         | .6         | 4.8        | 14.0         | 10.1         | 3.5          | 1.3          | 1.1          | 1.8   | 37.3  | 62.7               | 1389         |
| 18021         | .2         | .1         | 1.5        | 4.3        | 12.5         | 8.5          | 3.2          | 1.7          | 1.2          | 1.5   | 34.5  | 65.5               | 1427         |
| TOT           | 15         | 5          | 50         | 305        | 755          | 517          | 186          | 76           | 48           | 90    | 2047  | 3769               | 5816         |
| PCT           | .3         | .1         | .9         | 5.2        | 13.0         | 8.9          | 3.2          | 1.3          | .8           | 1.5   | 35.2  | 64.8               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .2   | .6    | .4  | 2.1 | 24.9 | 71.8 | 2185         |
| 06009         | .2   | .7    | .5  | 2.7 | 29.6 | 66.4 | 2560         |
| 12015         | .0   | .4    | .4  | 2.9 | 21.5 | 74.9 | 2227         |
| 18021         | .1   | .8    | .7  | 2.6 | 26.0 | 69.9 | 2515         |
| TOT           | 12   | 60    | 46  | 242 | 2434 | 6693 | 9487         |
| PCT           | .1   | .6    | .5  | 2.6 | 25.7 | 70.5 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .4            | 1.6        | 8.1         | 24.3            | 67.6              | 1327         |
| 06009         | .4            | 1.1        | 10.4        | 29.4            | 60.2              | 1379         |
| 12015         | .1            | .7         | 7.5         | 31.2            | 61.3              | 1554         |
| 18021         | .2            | 1.8        | 7.7         | 28.4            | 63.8              | 1382         |
| TOT           | 15            | 72         | 476         | 1605            | 3561              | 5642         |
| PCT           | .3            | 1.3        | 8.4         | 28.4            | 63.1              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | .1    | *     | .1    | .0     | 12           | .2          |
| 85/89  | .0   | .0    | .0    | *     | .7    | 1.9   | .6    | .1     | 198          | 3.4         |
| 80/84  | .0   | .0    | .1    | .1    | 1.9   | 23.8  | 28.5  | 4.5    | 3455         | 36.8        |
| 75/79  | .0   | .0    | .0    | *     | .4    | 6.9   | 19.3  | 9.6    | 2127         | 36.2        |
| 70/74  | .0   | .0    | .0    | .0    | *     | .1    | .5    | .7     | 77           | 1.3         |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | *      | 2            | *           |
| TOTAL  | 0    | 0     | 3     | 9     | 179   | 1924  | 2874  | 881    | 5871         | 100.0       |
| PCT    | .0   | .0    | .1    | .2    | 3.0   | 32.8  | 49.0  | 15.0   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE  | E   | SE  | S   | SW   | W    | NW   | VAR | CALM |
|------|-----|-----|-----|-----|------|------|------|-----|------|
| .1   | *   | .0  | .0  | .0  | *    | *    | *    | .0  | *    |
| 1.0  | .2  | .2  | .1  | .5  | .3   | .4   | .5   | .0  | .1   |
| 12.4 | 3.5 | 1.2 | 1.4 | 5.3 | 8.2  | 11.5 | 13.2 | .0  | 2.2  |
| 9.6  | 2.9 | .9  | .8  | 2.3 | 4.6  | 6.3  | 8.2  | .0  | .7   |
| .3   | .2  | *   | *   | .2  | .1   | .2   | .1   | .0  | .1   |
| *    | .0  | .0  | *   | .0  | .0   | .0   | .0   | .0  | .0   |
| 23.4 | 6.8 | 2.3 | 2.3 | 8.3 | 13.2 | 18.4 | 22.1 | .0  | 3.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 87  | 83  | 82  | 79  | 75 | 73 | 66  | 79.0 | 2755         |
| 06009         | 89  | 84  | 82  | 79  | 75 | 73 | 68  | 78.8 | 3656         |
| 12015         | 94  | 89  | 86  | 81  | 77 | 74 | 67  | 81.3 | 2723         |
| 18021         | 94  | 87  | 85  | 81  | 76 | 74 | 68  | 80.5 | 3575         |
| TOT           | 94  | 87  | 84  | 80  | 76 | 73 | 66  | 79.9 | 12709        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .1    | .7    | 22.9  | 58.3  | 18.0   | 84   | 1920         |
| 06009         | .0   | .1    | .7    | 21.8  | 57.3  | 20.2   | 84   | 1598         |
| 12015         | .0   | .3    | 6.2   | 45.6  | 37.0  | 11.0   | 80   | 1577         |
| 18021         | .0   | .4    | 4.6   | 40.9  | 43.3  | 10.8   | 81   | 1512         |
| TOT           | 0    | 13    | 188   | 2035  | 3039  | 932    | 82   | 6207         |



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PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1855-1973AREA 0008 DAKAR  
14.9N 17.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | W<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | *        | *        | *        | .0  | 4     | .0       | .1        |
| 11/13              | .0       | .0       | .0       | .0       | .1       | *        | *        | .0  | 7     | .0       | .1        |
| 9/10               | .0       | .0       | .0       | *        | .1       | *        | .1       | *   | 23    | *        | .3        |
| 7/8                | .0       | .0       | .0       | .1       | .2       | .2       | .1       | .0  | 40    | .0       | .6        |
| 6                  | .0       | .0       | .0       | .1       | .3       | .3       | *        | .0  | 56    | *        | .8        |
| 5                  | .0       | .0       | *        | .2       | .6       | .4       | .1       | .0  | 89    | *        | 1.4       |
| 4                  | .0       | .0       | *        | .3       | 1.0      | .7       | *        | .0  | 133   | .0       | 2.1       |
| 3                  | .0       | .0       | .1       | .5       | 1.5      | .7       | *        | .0  | 185   | *        | 2.8       |
| 2                  | .0       | .0       | *        | 1.0      | 3.1      | .6       | *        | .0  | 314   | .1       | 4.6       |
| 1                  | .0       | .0       | .2       | 2.8      | 6.1      | .3       | .0       | .0  | 612   | .2       | 9.3       |
| 0                  | .0       | *        | .3       | 6.7      | 9.4      | .3       | .0       | .0  | 1088  | .3       | 15.5      |
| -1                 | .0       | .0       | .6       | 11.5     | 9.5      | *        | .0       | .0  | 1401  | .5       | 21.1      |
| -2                 | .0       | .0       | .9       | 10.5     | 4.6      | .0       | .0       | .0  | 1039  | .2       | 15.8      |
| -3                 | .0       | *        | .9       | 7.9      | 1.9      | *        | .0       | .0  | 698   | .1       | 10.7      |
| -4                 | .0       | *        | .8       | 4.0      | .9       | *        | .0       | .0  | 378   | *        | 5.8       |
| -5                 | .0       | .0       | .9       | 2.0      | .5       | .0       | .0       | .0  | 226   | .0       | 3.5       |
| -6                 | .0       | *        | .6       | .9       | .1       | .0       | .0       | .0  | 101   | .0       | 1.6       |
| -7/-8              | *        | .1       | .4       | .4       | .1       | .0       | .0       | .0  | 61    | *        | .9        |
| -9/-10             | .0       | *        | .2       | .2       | .0       | .0       | .0       | .0  | 25    | *        | .4        |
| -11/-13            | .0       | *        | *        | *        | .0       | .0       | .0       | .0  | 5     | .0       | .1        |
| TOTAL              | 1        |          | 392      |          | 2593     |          | 34       |     | 6485  | 91       | 6394      |
| PCT                | *        | .3       | 6.0      | 49.2     | 40.0     | 3.9      | .5       | *   | 100.0 | 1.4      | 98.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | 1.0 | 1.6  | .1    | .0    | .0    | .0  | 2.8  | .3  | .5   | .1    | .0    | .0    | .0  | .8  |
| 1-2     | .7  | 8.3  | 1.3   | .0    | .0    | .0  | 10.3 | .1  | 2.5  | .3    | .0    | .0    | .0  | 3.0 |
| 3-4     | .1  | 3.7  | 3.2   | .1    | .0    | .0  | 7.1  | .0  | .6   | .7    | *     | .0    | .0  | 1.3 |
| 5-6     | .0  | .5   | 2.0   | .1    | .0    | .0  | 2.6  | .0  | .2   | .3    | *     | .0    | .0  | .5  |
| 7       | .0  | .1   | .7    | .3    | .0    | .0  | 1.1  | .0  | .0   | .2    | *     | .0    | .0  | .2  |
| 8-9     | .0  | *    | .3    | .0    | .0    | .0  | .3   | .0  | .0   | .1    | .1    | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 1.8 | 14.3 | 7.6   | .5    | .0    | .0  | 24.2 | .4  | 3.8  | 1.6   | .1    | .0    | .0  | 5.9 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .1  | .3   | .0    | .0    | .0    | .0  | .4  | .1  | .1   | .0    | .0    | .0    | .0  | .2  |
| 1-2     | .1  | .5   | .1    | .0    | .0    | .0  | .7  | *   | .8   | .2    | .0    | .0    | .0  | 1.0 |
| 3-4     | .0  | .1   | .3    | *     | .0    | .0  | .5  | .0  | .3   | .2    | *     | .0    | .0  | .5  |
| 5-6     | .0  | *    | .2    | .1    | .1    | .0  | .3  | .0  | .0   | .1    | .1    | .0    | .0  | .2  |
| 7       | .0  | .1   | .1    | .1    | .0    | .0  | .3  | .0  | .0   | .0    | .1    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 1.0  | .7    | .2    | .1    | .0  | 2.2 | .1  | 1.2  | .9    | .1    | .0    | .0  | 2.0 |

PERIOD: (OVER-ALL) 1963-1973

AUGUST

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14.9N 17.9W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|
| <1      | .5  | .9   | *     | .0    | .0    | .0  | 1.4 | .5  | 1.3  | .2    | .0    | .0    | .0  | 2.0  |
| 1-2     | .1  | 2.8  | .3    | .0    | .0    | .0  | 3.3 | .1  | 4.5  | 1.0   | .0    | .0    | .0  | 5.6  |
| 3-4     | .1  | .8   | .7    | .1    | .0    | .0  | 1.7 | .0  | 1.8  | 1.2   | .1    | .0    | .0  | 3.1  |
| 5-6     | .0  | .3   | .4    | .1    | .0    | .0  | .8  | .0  | .5   | 1.0   | .1    | .0    | .0  | 1.6  |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | *    | .5    | .1    | .0    | .0  | .6   |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | .0  | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | *     | .0    | .0    | .0  | *    |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | *    | .0    | .0    | .0    | .0  | *    |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | .7  | 4.9  | 1.6   | .2    | .0    | .0  | 7.4 | .6  | 8.2  | 4.0   | .3    | .0    | .0  | 13.1 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .8  | 2.4  | .1    | .0    | .0    | .0  | 3.2  | .6  | 2.2  | *     | .0    | .0    | .0  | 2.8  |           |
| 1-2     | .5  | 6.7  | .9    | .0    | .0    | .0  | 8.0  | .7  | 8.3  | 1.5   | .0    | .0    | .0  | 10.4 |           |
| 3-4     | .1  | 2.6  | 2.6   | *     | .0    | .0  | 5.2  | .0  | 3.0  | 3.3   | *     | .0    | .0  | 6.3  |           |
| 5-6     | .0  | .4   | 1.9   | *     | .0    | .0  | 2.3  | .0  | .4   | 2.0   | .1    | .0    | .0  | 2.5  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .3   | .0  | *    | .3    | .1    | .0    | .0  | .4   |           |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .3   | .0  | .0   | *     | .1    | .0    | .0  | *    |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .1    | .0    | .0    | .0  | .1   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | 1.3 | 12.0 | 5.8   | .2    | .0    | .0  | 19.2 | 1.3 | 13.9 | 7.1   | .2    | .0    | .0  | 22.5 | 96.4      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 9.0  | 9.4  | .4    | .0    | .0    | .0  | 18.8  |         |
| 1-2     | 2.6  | 33.8 | 5.5   | .0    | .0    | .0  | 41.9  |         |
| 3-4     | .3   | 12.7 | 11.7  | .4    | .0    | .0  | 25.0  |         |
| 5-6     | .0   | 2.3  | 7.7   | .5    | .1    | .0  | 10.5  |         |
| 7       | *    | .7   | 2.0   | .7    | .0    | .0  | 3.0   |         |
| 8-9     | .0   | *    | .5    | .2    | .0    | .0  | .7    |         |
| 10-11   | .0   | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 12      | .0   | *    | *     | .0    | .0    | .0  | .1    |         |
| 13-16   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 12.0 | 58.4 | 27.9  | 1.8   | .1    | .0  | 100.0 | 3411    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.5 | 13.1 | 15.1 | 5.8  | 1.9  | .5  | .2    | *  | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1729  | 3        |
| 6-7          | *   | 1.8  | 8.4  | 9.1  | 3.7  | .8  | .5    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1074  | 3        |
| 8-9          | .0  | .7   | 2.7  | 3.1  | 2.4  | .8  | .2    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 440   | 5        |
| 10-11        | .0  | .3   | .7   | .9   | .4   | .2  | .1    | *  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 121   | 5        |
| 12-13        | .0  | .0   | .9   | .5   | .1   | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 70    | 4        |
| >13          | .0  | .0   | .0   | .5   | .1   | *   | *     | *  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 32    | 6        |
| INDET        | 4.8 | 5.0  | 5.1  | 3.6  | 2.0  | .6  | .1    | *  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 938   | 3        |
| TOTAL        | 320 | 920  | 1452 | 1033 | 462  | 134 | 58    | 13 | 11    | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4404  | 4        |
| PCT          | 7.3 | 20.9 | 33.0 | 23.5 | 10.5 | 3.0 | 1.3   | .3 | .2    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1896-1973

SEPTEMBER

AREA 0008 DAKAR  
14.8N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |          |                     |            |                      |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|----------|---------------------|------------|----------------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGD PCPN | FGD WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST SNOW | NO SIG MEA |
| N        | 1.9                | .7        | .1   | .0        | .0   | .0              | .1   | 2.8                     | .8             | 3.8       | 2.2      | .0                  | 5.4        | .3                   | 85.1       |
| NE       | 3.9                | 1.4       | .5   | .0        | .0   | .0              | .0   | 5.8                     | 2.2            | 5.5       | .9       | .0                  | 2.8        | .3                   | 83.1       |
| E        | 9.4                | 2.5       | 1.9  | .0        | .0   | .0              | .0   | 13.9                    | 6.5            | 11.7      | .8       | .0                  | 1.1        | .8                   | 67.2       |
| SE       | 6.8                | 2.6       | 1.5  | .0        | .0   | .0              | .0   | 10.9                    | 4.8            | 8.0       | .3       | .0                  | .5         | .0                   | 77.2       |
| S        | 5.3                | 3.9       | 1.3  | .0        | .0   | .0              | .0   | 10.4                    | 3.3            | 5.1       | .9       | .0                  | 1.3        | .0                   | 79.6       |
| SW       | 4.9                | 2.4       | 1.3  | .0        | .0   | .0              | .2   | 8.6                     | 3.4            | 4.1       | 1.1      | .0                  | 2.9        | .2                   | 80.5       |
| W        | 1.6                | 1.4       | .4   | .0        | .0   | .0              | .0   | 3.4                     | 2.5            | 3.0       | 1.0      | .0                  | 2.5        | .4                   | 87.4       |
| NW       | 1.5                | .7        | .2   | .0        | .0   | .0              | .1   | 2.5                     | 1.7            | 3.8       | 1.1      | .0                  | 3.3        | .1                   | 87.9       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0       | .0                  | .0         | .0                   | .0         |
| CALM     | 2.7                | .8        | .4   | .0        | .0   | .0              | .0   | 3.8                     | 1.5            | 10.8      | .4       | .0                  | 2.7        | .0                   | 80.8       |
| TOT PCT  | 3.4                | 1.5       | .6   | .0        | .0   | .0              | *    | 5.5                     | 2.4            | 5.0       | 1.3      | .0                  | 3.1        | .2                   | 83.1       |
| TOT OBS: | 6473               |           |      |           |      |                 |      |                         |                |           |          |                     |            |                      |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT)       | PRECIPITATION TYPE |              |      |              |      |                       |      |                    | OTHER WEATHER PHENOMENA |              |                   |                           |               |                       |                  |  |
|---------------------|--------------------|--------------|------|--------------|------|-----------------------|------|--------------------|-------------------------|--------------|-------------------|---------------------------|---------------|-----------------------|------------------|--|
|                     | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME | PCPN PAST<br>HOUR       | THDR<br>LTNG | FGD<br>WD<br>PCPN | FGD WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>DUST | NO<br>SIG<br>WEA |  |
| 00003               | 3.7                | 1.1          | .4   | .0           | .0   | .0                    | .0   | 5.2                | 2.0                     | 11.1         | .8                | .0                        | 2.3           | .2                    | 79.1             |  |
| 06009               | 5.8                | 2.2          | 1.1  | .0           | .0   | .0                    | .0   | 9.1                | 2.8                     | 8.2          | 1.7               | .0                        | 2.5           | .1                    | 77.0             |  |
| 12015               | 2.9                | 1.6          | .5   | .0           | .0   | .0                    | .1   | 5.0                | 3.1                     | .4           | .7                | .0                        | 3.7           | .5                    | 86.8             |  |
| 18021               | 1.2                | 1.3          | .4   | .0           | .0   | .0                    | .1   | 3.1                | 1.8                     | 1.3          | 1.8               | .0                        | 3.9           | .1                    | 88.2             |  |
| TOT PCT<br>TOT OBS: | 3.4<br>6979        | 1.6          | .6   | .0           | .0   | .0                    | *    | 5.6                | 2.4                     | 5.1          | 1.3               | .0                        | 3.1           | .2                    | 82.8             |  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |       |           |          |          | 00         | 03    | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 2.4                | 13.2 | 8.1   | .5    | *     | .0  |       | 24.2      | 9.5      |          | 23.0       | 17.8  | 22.6  | 23.9  | 25.8  | 25.9  | 26.4  | 22.4  |
| NE       | 1.2                | 7.1  | 4.1   | .4    | *     | .0  |       | 12.8      | 9.5      |          | 11.8       | 11.8  | 11.7  | 15.6  | 14.3  | 8.2   | 12.3  | 13.6  |
| E        | .6                 | 3.3  | 1.5   | .3    | *     | .0  |       | 5.6       | 9.6      |          | 4.6        | 2.7   | 5.4   | 6.2   | 6.7   | 11.4  | 5.1   | 5.6   |
| SE       | .6                 | 3.2  | 1.6   | .3    | *     | .0  |       | 5.7       | 9.7      |          | 4.8        | 7.1   | 5.6   | 6.9   | 6.8   | 9.5   | 5.3   | 4.3   |
| S        | 1.5                | 5.4  | 2.2   | .3    | *     | .0  |       | 9.4       | 8.6      |          | 9.3        | 6.5   | 8.9   | 8.3   | 9.9   | 8.8   | 10.4  | 9.3   |
| SW       | 1.3                | 6.5  | 2.1   | .1    | *     | .0  |       | 10.0      | 8.0      |          | 11.4       | 13.8  | 10.7  | 7.6   | 8.5   | 8.0   | 9.8   | 11.8  |
| W        | 1.4                | 8.2  | 1.8   | *     | .0    | .0  |       | 11.5      | 7.3      |          | 11.8       | 12.1  | 11.6  | 11.3  | 10.5  | 9.5   | 11.9  | 12.1  |
| NW       | 1.8                | 10.5 | 3.7   | .1    | *     | .0  |       | 16.1      | 8.1      |          | 16.9       | 20.3  | 18.1  | 15.9  | 14.0  | 17.2  | 15.2  | 16.2  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       |          | .0         | .0    | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 4.7                |      |       |       |       |     |       | 4.7       | .0       |          | 6.4        | 8.0   | 5.4   | 4.4   | 3.6   | 1.5   | 3.6   | 4.8   |
| TOT OBS  | 1750               | 6511 | 2857  | 220   | 11    | 0   | 11349 |           | 8.4      |          | 2252       | 198   | 2226  | 978   | 2335  | 134   | 2257  | 1029  |
| TOT PCT  | 15.4               | 57.4 | 25.2  | 1.9   | .1    | .0  |       | 100.0     |          |          | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 06    | 12    | 18    | 21 |
| N        | 7.9                | 13.8 | 2.4   | .1    | .0  |           | 24.2     | 9.5      | 22.7       | 23.0  | 25.8  | 25.1  |    |
| NE       | 4.4                | 7.0  | 1.4   | .1    | .0  |           | 12.8     | 9.5      | 11.8       | 12.9  | 14.0  | 12.7  |    |
| E        | 2.0                | 2.8  | .6    | .1    | .0  |           | 5.6      | 9.6      | 4.5        | 5.7   | 6.9   | 5.3   |    |
| SE       | 2.0                | 3.0  | .6    | .1    | .0  |           | 5.7      | 9.7      | 5.0        | 6.0   | 6.9   | 5.0   |    |
| S        | 4.2                | 4.3  | .9    | .1    | .0  |           | 9.4      | 8.6      | 9.2        | 8.7   | 9.8   | 10.0  |    |
| SW       | 4.6                | 4.8  | .6    | *     | .0  |           | 10.0     | 8.0      | 11.5       | 9.7   | 8.5   | 10.4  |    |
| W        | 5.7                | 5.4  | .3    | *     | .0  |           | 11.5     | 7.3      | 11.8       | 11.5  | 10.4  | 12.0  |    |
| NW       | 6.8                | 8.7  | .5    | *     | .0  |           | 16.1     | 8.1      | 17.1       | 17.4  | 14.2  | 15.5  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 4.7                |      |       |       |     |           | 4.7      | .0       | 6.5        | 5.1   | 3.4   | 4.0   |    |
| TOT OBS  | 4802               | 5649 | 842   | 56    | 0   | 11349     |          | 8.4      | 2390       | 3204  | 2469  | 3286  |    |
| TOT PCT  | 42.3               | 49.8 | 7.4   | .5    | .0  |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



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(OVER-ALL) 1836-1973

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | CALM | 1-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|----------|------|------|------|-------|-------|-------|-----|------|----------|-----------|
| 0000     | 6.5  | 11.3 | 57.2 | 23.4  | 1.6   | *     | .0  | 8.0  | 100.0    | 2390      |
| 0600     | 5.1  | 11.2 | 56.2 | 25.2  | 2.1   | .1    | .0  | 8.3  | 100.0    | 3204      |
| 1200     | 3.4  | 9.6  | 56.7 | 28.0  | 2.1   | .2    | .0  | 8.9  | 100.0    | 2469      |
| 1800     | 4.0  | 10.6 | 59.1 | 24.3  | 1.9   | .1    | .0  | 8.3  | 100.0    | 3286      |
| TOT      | 534  | 1216 | 6511 | 2857  | 220   | 11    | 0   | 8.4  |          | 11349     |
| PCT      | 4.7  | 10.7 | 57.4 | 25.2  | 1.9   | .1    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 & 6  | TOTAL | MEAN        |
|----------|------|------|------|--------|-------|-------------|
|          |      |      |      | OBS CD | OBS   | CLOUD COVER |
| N        | 10.7 | 5.3  | 6.7  | 3.0    |       | 3.5         |
| NE       | 3.7  | 2.1  | 2.9  | 1.7    |       | 3.9         |
| E        | .7   | .7   | 2.1  | 1.8    |       | 5.8         |
| SE       | .9   | .9   | 2.3  | 1.6    |       | 5.5         |
| S        | 2.1  | 1.8  | 3.8  | 1.9    |       | 4.9         |
| SW       | 2.4  | 2.1  | 3.2  | 2.0    |       | 4.7         |
| W        | 3.8  | 2.8  | 3.5  | 1.8    |       | 4.1         |
| NW       | 6.3  | 4.0  | 3.0  | 2.0    |       | 3.7         |
| VAR      | .0   | .0   | .0   | .0     |       | .0          |
| CALM     | 1.3  | 1.1  | 1.2  | .8     |       | 4.0         |
| TOT OBS  | 1640 | 1063 | 1577 | 847    | 5127  | 4.2         |
| TOT PCT  | 32.0 | 20.7 | 30.8 | 16.5   | 100.0 |             |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|---------|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
|         | 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| N       | .1  | .0  | .1  | .9  | 2.0  | 1.3  | .7   | .2   | .1   | .7    | 19.8    |       |
| NE      | *   | *   | .1  | .4  | .9   | .6   | .4   | .1   | .1   | .3    | 7.3     |       |
| E       | *   | *   | .2  | .3  | 1.0  | .8   | .3   | *    | .0   | .1    | 2.5     |       |
| SE      | *   | .0  | .1  | .4  | .9   | .5   | .1   | .1   | *    | .1    | 3.3     |       |
| S       | *   | *   | .2  | .6  | 1.2  | .7   | .4   | .1   | *    | .1    | 6.3     |       |
| SW      | .1  | *   | .1  | .5  | .9   | .8   | .4   | .2   | *    | .2    | 6.6     |       |
| W       | *   | .0  | .1  | .4  | .9   | .7   | .2   | .1   | .1   | .3    | 9.0     |       |
| NW      | *   | .0  | .1  | .4  | 1.3  | 1.2  | .4   | .2   | .1   | .2    | 13.4    |       |
| VAR     | .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| CALM    | .0  | .0  | *   | .3  | .4   | .3   | *    | *    | .0   | .1    | 3.1     |       |
| TOT OBS | 14  | 3   | 54  | 221 | 483  | 359  | 145  | 58   | 28   | 109   | 3651    | 5127  |
| TOT PCT | .3  | .1  | 1.1 | 4.3 | 9.5  | 7.0  | 2.8  | 1.1  | .5   | 2.1   | 71.2    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING (FEET) | = OR >10 | = OR >5 | = OR >2 | VSBY (NM)<br>= OR >1 | = OR >1/2 | = OR >1/4 | = OR >50YD | = OR >0 |
|----------------|----------|---------|---------|----------------------|-----------|-----------|------------|---------|
| = OR >6500     | 2.2      | 2.7     | 2.8     | 2.8                  | 2.8       | 2.8       | 2.8        | 2.8     |
| = OR >5000     | 3.1      | 3.8     | 3.9     | 3.9                  | 3.9       | 3.9       | 3.9        | 3.9     |
| = OR >3500     | 5.5      | 6.5     | 6.6     | 6.7                  | 6.7       | 6.7       | 6.7        | 6.7     |
| = OR >2000     | 10.8     | 13.2    | 13.4    | 13.5                 | 13.5      | 13.5      | 13.6       | 13.6    |
| = OR >1000     | 17.7     | 21.9    | 22.5    | 22.6                 | 22.7      | 22.7      | 22.7       | 22.7    |
| = OR >600      | 20.5     | 26.1    | 26.8    | 26.9                 | 27.0      | 27.1      | 27.1       | 27.1    |
| = OR >300      | 21.1     | 27.0    | 27.9    | 28.0                 | 28.1      | 28.1      | 28.2       | 28.2    |
| = OR >150      | 21.1     | 27.0    | 27.9    | 28.0                 | 28.2      | 28.2      | 28.2       | 28.2    |
| = OR >0        | 21.1     | 27.1    | 28.1    | 28.3                 | 28.4      | 28.4      | 28.5       | 28.5    |
| TOTAL          | 1157     | 1487    | 1543    | 1552                 | 1558      | 1561      | 1562       | 1564    |

TOTAL NUMBER OF OBS: 5487

PCT FREQ NH <5/8: 71.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3    | 4   | 5   | 6   | 7   | 8    | OBS CD | TOTAL OBS |
|------|------|------|------|-----|-----|-----|-----|------|--------|-----------|
| 20.2 | 13.6 | 15.2 | 12.3 | 9.7 | 6.0 | 6.6 | 6.1 | 10.3 | .2     | 5781      |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | *    | .0   | *   | .0  | .0  | *    | *    | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .0   | .0   | *   | .0  | .0  | .0   | .0   | .0   | .0  | .0   | *     |              |
|              | TOT %  | .0   | .0   | *   | .0  | .0  | *    | .0   | .0   | .0  | .0   | .1    |              |
| 1/2<1        | PCP    | *    | *    | *   | *   | *   | *    | .0   | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .3   | *    | *   | .0  | .1  | .1   | .1   | .1   | .0  | .0   | .7    |              |
|              | TOT %  | .3   | *    | .1  | *   | .1  | .1   | .1   | .1   | .0  | .0   | .8    |              |
| 1<2          | PCP    | *    | *    | *   | *   | *   | *    | *    | .0   | .0  | .0   | .2    |              |
|              | NO PCP | .2   | .1   | .1  | *   | *   | .1   | .1   | .1   | .0  | *    | .7    |              |
|              | TOT %  | .2   | .1   | .1  | *   | *   | .1   | .1   | .1   | .0  | *    | .8    |              |
| 2<5          | PCP    | .1   | .1   | .2  | *   | .1  | *    | .1   | .1   | .0  | *    | .7    |              |
|              | NO PCP | .3   | .1   | .1  | *   | .1  | .1   | .1   | .1   | .0  | *    | .8    |              |
|              | TOT %  | .4   | .2   | .2  | .1  | .2  | .1   | .1   | .2   | .0  | *    | 1.6   |              |
| 5<10         | PCP    | .3   | .3   | .3  | .3  | .5  | .2   | .2   | .2   | .0  | .1   | 2.6   |              |
|              | NO PCP | 5.1  | 1.7  | 1.1 | .9  | 1.4 | 1.8  | 2.3  | 3.5  | .0  | .5   | 18.2  |              |
|              | TOT %  | 5.3  | 2.0  | 1.4 | 1.2 | 1.9 | 2.3  | 2.5  | 3.7  | .0  | .6   | 20.8  |              |
| 10+          | PCP    | .3   | .2   | .2  | .3  | .4  | .3   | .1   | .1   | .0  | *    | 1.8   |              |
|              | NO PCP | 18.6 | 7.7  | 3.4 | 4.1 | 7.2 | 7.2  | 9.1  | 13.3 | .0  | 3.3  | 74.0  |              |
|              | TOT %  | 18.9 | 7.8  | 3.6 | 4.4 | 7.7 | 7.5  | 9.2  | 13.5 | .0  | 3.3  | 75.9  |              |
| TOT OBS      |        |      |      |     |     |     |      |      |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |      |      |      |     |      |       |              |
|              |        | 25.2 | 10.1 | 5.4 | 5.7 | 9.9 | 10.1 | 12.0 | 17.5 | .0  | 4.0  | 100.0 | 6468         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|------|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | *    | .0   | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | *   | .0  | .0  | *   | .0   | .0   | .0  |      | *     |              |
|              | 11-21      | *    | .0   | *   | .0  | .0  | *   | *    | .0   | .0  |      | *     |              |
|              | 22+        | .0   | *    | *   | .0  | .0  | .0  | .0   | .0   | .0  |      | *     |              |
|              | TOT %      | *    | *    | *   | .0  | .0  | *   | *    | .0   | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | .0   | .0  | .0  | *   | *   | *    | *    | .0  | .0   | .1    |              |
|              | 4-10       | .2   | *    | *   | .0  | .1  | *   | .1   | .1   | .0  |      | .4    |              |
|              | 11-21      | .1   | *    | *   | .0  | .0  | *   | .0   | *    | .0  |      | .1    |              |
|              | 22+        | .0   | .0   | *   | *   | .0  | .0  | .0   | .0   | .0  |      | *     |              |
|              | TOT %      | .3   | *    | .1  | *   | .1  | .1  | .1   | .1   | .0  | .0   | .7    |              |
| 1<2          | 0-3        | *    | .0   | *   | *   | *   | *   | *    | *    | .0  | *    | .1    |              |
|              | 4-10       | .1   | .1   | *   | *   | *   | .1  | .1   | .1   | .0  |      | .5    |              |
|              | 11-21      | .1   | *    | *   | *   | *   | *   | *    | *    | .0  |      | .3    |              |
|              | 22+        | *    | *    | *   | .0  | .0  | *   | .0   | .0   | .0  |      | *     |              |
|              | TOT %      | .2   | .1   | .1  | .1  | *   | .1  | .1   | .1   | .0  | *    | .9    |              |
| 2<5          | 0-3        | *    | .0   | *   | .0  | *   | *   | *    | *    | .0  | .1   | .2    |              |
|              | 4-10       | .3   | .2   | .2  | .1  | .1  | .1  | .2   | .1   | .0  |      | 1.2   |              |
|              | 11-21      | .1   | .1   | .1  | *   | .1  | *   | *    | .1   | .0  |      | .6    |              |
|              | 22+        | *    | *    | .1  | *   | *   | *   | .0   | .0   | .0  |      | .2    |              |
|              | TOT %      | .5   | .3   | .3  | .1  | .2  | .1  | .2   | .2   | .0  | .1   | 2.2   |              |
| 5<10         | 0-3        | .4   | .2   | .1  | .1  | .3  | .3  | .3   | .5   | .0  | .8   | 2.9   |              |
|              | 4-10       | 2.7  | 1.3  | .6  | .6  | 1.0 | 1.2 | 1.6  | 2.1  | .0  |      | 11.1  |              |
|              | 11-21      | 2.0  | .6   | .6  | .3  | .5  | .6  | .4   | .9   | .0  |      | 6.1   |              |
|              | 22+        | .1   | .1   | .1  | .1  | .1  | .1  | .0   | *    | .0  |      | .6    |              |
|              | TOT %      | 5.2  | 2.3  | 1.4 | 1.2 | 1.9 | 2.2 | 2.3  | 3.5  | .0  | .8   | 20.7  |              |
| 10+          | 0-3        | 1.8  | .9   | .4  | .4  | 1.0 | .9  | 1.1  | 1.2  | .0  | 3.8  | 11.5  |              |
|              | 4-10       | 10.1 | 4.8  | 2.4 | 2.6 | 4.4 | 4.9 | 6.6  | 8.8  | .0  |      | 44.5  |              |
|              | 11-21      | 6.1  | 2.8  | 1.0 | 1.2 | 1.7 | 1.4 | 1.4  | 2.9  | .0  |      | 18.6  |              |
|              | 22+        | .2   | .2   | .1  | .1  | .2  | *   | *    | .1   | .0  |      | .8    |              |
|              | TOT %      | 18.2 | 8.6  | 3.8 | 4.3 | 7.2 | 7.3 | 9.2  | 12.9 | .0  | 3.8  | 75.4  |              |
| TOT OBS      |            |      |      |     |     |     |     |      |      |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |      |      |     |      |       |              |
|              |            | 24.4 | 11.4 | 5.7 | 5.7 | 9.4 | 9.9 | 11.9 | 16.9 | .0  | 4.7  | 100.0 | 8470         |

SEPTEMBER

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

AREA 0008 DAKAR  
14.8N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00603         | .2         | .0         | 1.1        | 3.9        | 7.5          | 5.7          | 2.0          | .7           | .5           | 2.2   | 23.8  | 76.2               | 1325         |
| 06609         | .7         | .1         | 1.1        | 5.0        | 11.9         | 6.7          | 2.9          | 1.5          | .4           | 2.1   | 32.6  | 67.4               | 1360         |
| 12615         | .1         | .1         | 1.1        | 4.4        | 9.1          | 7.6          | 3.2          | 1.0          | .5           | 2.4   | 29.5  | 70.5               | 1552         |
| 18621         | .0         | .1         | .8         | 3.4        | 7.2          | 6.7          | 2.5          | 1.1          | .6           | 2.0   | 24.4  | 75.6               | 1425         |
| TOT           | 15         | 4          | 59         | 238        | 504          | 380          | 152          | 60           | 29           | 124   | 1565  | 4097               | 5662         |
| PCT           | .3         | .1         | 1.0        | 4.2        | 8.9          | 6.7          | 2.7          | 1.1          | .5           | 2.2   | 27.6  | 72.4               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00603         | .1   | .4    | .8  | 2.4 | 19.9 | 76.3 | 2031         |
| 06609         | .2   | 1.1   | 1.2 | 2.4 | 23.4 | 71.7 | 2409         |
| 12615         | .0   | .6    | .5  | 2.0 | 18.8 | 78.1 | 2096         |
| 18621         | .2   | .7    | 1.1 | 1.7 | 21.6 | 74.8 | 2445         |
| TOT           | 11   | 65    | 81  | 190 | 1891 | 6743 | 8981         |
| PCT           | .1   | .7    | .9  | 2.1 | 21.1 | 75.1 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00603         | .2           | 1.5        | 7.2         | 18.3            | 74.6              | 1281         |
| 06609         | .8           | 2.3        | 8.3         | 25.6            | 66.1              | 1312         |
| 12615         | .1           | 1.6        | 7.3         | 23.4            | 69.3              | 1522         |
| 18621         | .0           | 1.1        | 5.7         | 20.3            | 74.1              | 1372         |
| TOT           | 15           | 88         | 390         | 1204            | 3893              | 5487         |
| PCT           | .3           | 1.6        | 7.1         | 21.9            | 70.9              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .0    | .3    | .1    | .0    | .0     | 18           | .3          |
| 85/89  | .0   | .0    | .0    | .1    | 1.2   | 4.6   | 1.2   | .2     | 406          | 7.3         |
| 80/84  | .0   | .0    | .0    | .1    | 1.7   | 24.8  | 37.0  | 5.5    | 3838         | 69.1        |
| 75/79  | .0   | .0    | .0    | .0    | .2    | 3.1   | 12.7  | 6.5    | 1248         | 22.5        |
| 70/74  | .0   | .0    | .0    | .0    | .0    | .0    | .1    | .5     | 41           | .7          |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .0    | .0    | .0     | 1            | .0          |
| TOTAL  | 0    | 0     | 2     | 11    | 190   | 1813  | 2832  | 704    | 5552         | 100.0       |
| PCT    | .0   | .0    | .0    | .2    | 3.4   | 32.7  | 51.0  | 12.7   |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE  | S   | SW  | W    | NW   | VAR | CALM |
|------|------|-----|-----|-----|-----|------|------|-----|------|
| .2   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   |
| 2.7  | .8   | .2  | .3  | .7  | .6  | .6   | 1.0  | .0  | .5   |
| 17.6 | 6.5  | 3.3 | 3.8 | 6.3 | 6.4 | 9.1  | 13.3 | .0  | 2.9  |
| 9.0  | 2.9  | 1.7 | 1.4 | 2.6 | 2.8 | 2.1  | 3.2  | .0  | .8   |
| .2   | .1   | .1  | .1  | .1  | .0  | .0   | .0   | .0  | .0   |
| .0   | .0   | .0  | .0  | .0  | .0  | .0   | .0   | .0  | .0   |
| 25.7 | 10.3 | 5.4 | 5.6 | 9.7 | 9.8 | 11.9 | 17.5 | .0  | 4.1  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00603         | 90  | 84  | 83  | 80  | 77 | 74 | 67  | 80.1 | 2521         |
| 06609         | 90  | 85  | 83  | 80  | 76 | 74 | 70  | 79.9 | 3339         |
| 12615         | 95  | 90  | 87  | 82  | 78 | 75 | 68  | 82.4 | 2528         |
| 18621         | 93  | 89  | 86  | 82  | 78 | 76 | 68  | 81.8 | 3340         |
| TOT           | 95  | 88  | 85  | 81  | 77 | 74 | 67  | 81.0 | 11728        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00603         | .0   | .1    | .7    | 20.9  | 62.8  | 15.5  | 84    | 1424   |      |              |
| 06609         | .0   | .1    | 1.0   | 19.3  | 59.6  | 19.9  | 84    | 1526   |      |              |
| 12615         | .0   | .3    | 7.9   | 47.0  | 37.0  | 7.8   | 79    | 1520   |      |              |
| 18621         | .0   | .5    | 3.7   | 43.1  | 44.5  | 8.2   | 80    | 1504   |      |              |
| TOT           | 0    | 15    | 202   | 1954  | 3036  | 767   | 82    | 5974   |      |              |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1856-1973

# SEPTEMBER

AREA 0008 DAKAR  
14.8N 17.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | .0       | .0       | *   | 1     | .0       | *         |
| 11/13              | .0       | .0       | .0       | *        | *        | .1       | *        | *   | 12    | .0       | .2        |
| 9/10               | .0       | .0       | .0       | *        | .2       | .1       | .1       | *   | 25    | *        | .4        |
| 7/8                | .0       | .0       | .0       | .1       | .2       | .2       | .3       | .0  | 44    | *        | .7        |
| 6                  | .0       | .0       | *        | .1       | .1       | .3       | .2       | .0  | 43    | .0       | .7        |
| 5                  | .0       | .0       | *        | .1       | .4       | .7       | .2       | .0  | 88    | .1       | 1.4       |
| 4                  | .0       | .0       | *        | .1       | .7       | 1.1      | *        | .0  | 122   | *        | 2.0       |
| 3                  | .0       | .0       | .0       | .2       | 1.7      | 1.7      | *        | .0  | 221   | .1       | 3.5       |
| 2                  | .0       | .0       | *        | .5       | 4.2      | 1.4      | .0       | .0  | 380   | .1       | 6.1       |
| 1                  | *        | .0       | *        | 1.2      | 8.7      | 1.2      | .0       | .0  | 689   | .1       | 11.1      |
| 0                  | .0       | *        | .1       | 3.9      | 13.6     | .4       | .0       | .0  | 1103  | .4       | 17.5      |
| -1                 | .0       | *        | .1       | 8.0      | 13.6     | .2       | .0       | .0  | 1347  | .3       | 21.6      |
| -2                 | .0       | *        | .1       | 8.4      | 6.3      | .1       | .0       | .0  | 913   | .2       | 14.6      |
| -3                 | .0       | .0       | .4       | 6.0      | 2.2      | *        | .0       | .0  | 529   | *        | 8.6       |
| -4                 | .0       | *        | .6       | 2.8      | .8       | .0       | .0       | .0  | 262   | .0       | 4.3       |
| -5                 | .0       | .0       | .7       | 2.0      | .4       | .0       | .0       | .0  | 194   | .0       | 3.2       |
| -6                 | .0       | *        | .4       | .7       | .1       | .0       | .0       | .0  | 77    | .0       | 1.3       |
| -7/-8              | .0       | *        | .6       | .4       | *        | .0       | .0       | .0  | 63    | .0       | 1.0       |
| -9/-10             | .0       | *        | .2       | *        | *        | .0       | .0       | .0  | 21    | .0       | .3        |
| -11/-13            | *        | *        | *        | *        | .0       | .0       | .0       | .0  | 5     | .0       | .1        |
| -14/-16            | *        | .0       | .0       | .0       | .0       | .0       | .0       | .0  | 1     | .0       | *         |
| TOTAL              | 3        |          | 210      |          | 3274     |          | 56       |     | 6140  |          | 89        |
| PCT                | *        | .2       | 3.4      | 34.6     | 53.3     | 7.5      | .9       | .1  | 100.0 | 1.4      | 98.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     |      | NE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | 1.2 | 2.1  | 2.1   | .0    | .0    | .0  | 3.4  | .2  | .8   | .1    | .0    | .0    | .0  | 1.1 |
| 1-2     | .8  | 7.9  | 2.3   | .0    | .0    | .0  | 11.0 | .5  | 2.8  | .6    | .0    | .0    | .0  | 3.9 |
| 3-4     | .1  | 3.1  | 3.1   | .2    | .0    | .0  | 6.4  | *   | 1.2  | 1.4   | .1    | .0    | .0  | 2.7 |
| 5-6     | .0  | .6   | 2.5   | .1    | *     | .0  | 3.2  | .0  | .2   | .9    | .1    | *     | .0  | 1.3 |
| 7       | .0  | .3   | .9    | .1    | .0    | .0  | 1.3  | .0  | *    | .1    | *     | .0    | .0  | .2  |
| 8-9     | .0  | *    | .2    | *     | .0    | .0  | .2   | .0  | *    | .1    | *     | .0    | .0  | .1  |
| 10-11   | .0  | *    | .0    | .1    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .1    | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | *    | .0    | .0    | .0    | .0  | *    | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | 2.1 | 14.0 | 9.2   | .4    | *     | .0  | 25.8 | .7  | 5.0  | 3.2   | .3    | *     | .0  | 9.2 |

| HGT     | E   |      |       |       |       |     |     | SE  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .1  | .3   | .1    | .0    | .0    | .0  | .5  | .2  | .6   | .0    | .0    | .0    | .0  | .8  |
| 1-2     | .2  | 1.5  | .4    | .0    | .0    | .0  | 2.1 | .2  | 1.3  | .5    | .0    | .0    | .0  | 2.0 |
| 3-4     | *   | .9   | .8    | .1    | .0    | .0  | 1.8 | .0  | 1.0  | .7    | .1    | .0    | .0  | 1.8 |
| 5-6     | .0  | .1   | .2    | .1    | .0    | .0  | .4  | .0  | .2   | .4    | .1    | .0    | .0  | .6  |
| 7       | .0  | *    | .2    | .1    | *     | .0  | .3  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | *     | *     | .0    | .0  | .1  | .0  | .0   | *     | *     | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | *     | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 2.9  | 1.6   | .3    | .1    | .0  | 5.2 | .4  | 3.0  | 1.7   | .2    | .0    | .0  | 5.3 |

PERIOD: (OVER-ALL) 1963-1973

SEPTEMBER

AREA 0005 DAKAR

TABLE 18 (CONT)

14.8N 17.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .5  | .7   | .1    | .0    | .0    | .0  | 1.3 | .5  | 1.2  | *     | .0    | .0    | .0  | 1.7 |
| 1-2     | .2  | 3.6  | .7    | .0    | .0    | .0  | 4.5 | .5  | 3.0  | .6    | .0    | .0    | .0  | 4.0 |
| 3-4     | .1  | 1.3  | 1.0   | .1    | .0    | .0  | 2.5 | *   | 1.4  | 1.1   | *     | .0    | .0  | 2.5 |
| 5-6     | *   | .2   | .7    | .1    | .0    | .0  | .9  | .0  | .3   | .6    | .1    | .0    | .0  | .9  |
| 7       | .0  | *    | .2    | *     | .0    | .0  | .3  | .0  | .1   | .1    | *     | .0    | .0  | .2  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .9  | 5.8  | 2.8   | .3    | .0    | .0  | 9.7 | 1.0 | 5.9  | 2.5   | .1    | .0    | .0  | 9.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .5  | 1.3  | *     | .0    | .0    | .0  | 1.8  | .6  | 2.5  | .2    | .0    | .0    | .0  | 3.3  |           |
| 1-2     | .6  | 4.7  | .7    | .0    | .0    | .0  | 6.0  | .5  | 7.3  | 1.4   | .0    | .0    | .0  | 9.2  |           |
| 3-4     | .0  | 1.7  | 1.2   | .0    | .0    | .0  | 3.0  | *   | 2.8  | 1.8   | *     | .0    | .0  | 4.6  |           |
| 5-6     | .0  | .2   | .3    | .0    | .0    | .0  | .5   | .0  | .3   | 1.0   | *     | .0    | .0  | 1.4  |           |
| 7       | .0  | .1   | *     | .0    | .0    | .0  | .1   | .0  | *    | .3    | .0    | .0    | .0  | .4   |           |
| 8-9     | .0  | *    | *     | .0    | .0    | .0  | .1   | .0  | *    | *     | .0    | .0    | .0  | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | *     | .0    | .0  | *    |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | *     | .0    | .0    | .0  | *    |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | *    | .0    | .0    | .0    | .0  | *    |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | 1.0 | 8.1  | 2.3   | .0    | .0    | .0  | 11.4 | 1.1 | 13.0 | 4.8   | *     | .0    | .0  | 18.9 | 95.0      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 10.9 | 9.7  | .5    | .0    | .0    | .0  | 21.1  |         |
| 1-2     | 4.2  | 31.1 | 6.8   | .0    | .0    | .0  | 42.1  |         |
| 3-4     | .4   | 12.9 | 10.5  | .5    | .0    | .0  | 24.3  |         |
| 5-6     | *    | 2.0  | 6.3   | .5    | .1    | .0  | 8.8   |         |
| 7       | *    | .5   | 1.8   | .2    | *     | .0  | 2.6   |         |
| 8-9     | .0   | .1   | .5    | .2    | .0    | .0  | .7    |         |
| 10-11   | .0   | *    | .1    | .1    | *     | .0  | .2    |         |
| 12      | .0   | .0   | .1    | .0    | .0    | .0  | .1    |         |
| 13-16   | .0   | *    | *     | .0    | .0    | .0  | .1    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 15.6 | 56.2 | 26.6  | 1.5   | .1    | .0  | 100.0 | 3485    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7   | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|-----|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.0 | 13.6 | 14.3 | 6.4  | 1.7 | .6  | .2    | .0 | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1685  | 3        |
| 6-7          | *   | 2.0  | 8.1  | 7.6  | 3.3 | 1.1 | .4    | .3 | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 993   | 5        |
| 8-9          | .0  | .6   | 2.1  | 3.4  | 2.3 | 1.0 | .5    | .3 | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 447   | 6        |
| 10-11        | .0  | .8   | 1.0  | 1.1  | .6  | .2  | .1    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 171   | 5        |
| 12-13        | .0  | .0   | 1.4  | .7   | .3  | .1  | *     | *  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 109   | 4        |
| >13          | .0  | .0   | .0   | .5   | .4  | .1  | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 42    | 6        |
| INDET        | 5.9 | 4.9  | 5.7  | 2.6  | 1.0 | .3  | .2    | *  | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 888   | 3        |
| TOTAL        | 331 | 954  | 1413 | 966  | 412 | 146 | 44    | 29 | 17    | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4335  | 4        |
| PCT          | 7.6 | 22.0 | 32.6 | 22.3 | 9.5 | 3.4 | 1.5   | .7 | .4    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0008 DAKAR  
14.8N 18.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| PRECIPITATION TYPE |      |           |      |           |      |                 |      |                 |                | OTHER WEATHER PHENOMENA |             |                     |            |                 |            |
|--------------------|------|-----------|------|-----------|------|-----------------|------|-----------------|----------------|-------------------------|-------------|---------------------|------------|-----------------|------------|
| WIND DIR           | RAIN | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME | PCPN PAST HOUR | THDR LTNG               | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N                  | .3   | .2        | .3   | .0        | .0   | .0              | .0   | .8              | .4             | 1.8                     | 1.6         | .0                  | 2.5        | .4              | 92.6       |
| NE                 | .5   | 1.0       | .3   | .0        | .0   | .0              | .0   | 1.8             | .7             | 2.3                     | .9          | .0                  | 1.5        | .6              | 92.2       |
| E                  | 4.5  | 3.5       | .4   | .0        | .0   | .0              | .0   | 8.3             | 3.4            | 4.2                     | .3          | .0                  | .9         | .3              | 83.4       |
| SE                 | 8.2  | 3.2       | 1.1  | .0        | .0   | .0              | .0   | 12.4            | 3.6            | 8.1                     | .0          | .0                  | 1.1        | .0              | 76.8       |
| S                  | 2.5  | 4.8       | .2   | .0        | .0   | .0              | .0   | 7.6             | 3.5            | 7.6                     | .5          | .3                  | 1.4        | .3              | 79.4       |
| SW                 | 2.8  | 3.4       | .4   | .0        | .0   | .0              | .0   | 6.5             | 1.0            | 7.5                     | 1.1         | .0                  | 2.0        | 1.1             | 80.9       |
| W                  | .5   | .0        | .0   | .0        | .0   | .0              | .0   | .5              | .7             | 4.8                     | 1.2         | .0                  | 2.7        | .0              | 90.5       |
| NW                 | .8   | .0        | .2   | .0        | .0   | .0              | .0   | 1.0             | .5             | 4.1                     | 3.3         | .0                  | 3.0        | .3              | 87.8       |
| VAR                | .0   | .0        | .0   | .0        | .0   | .0              | .0   | .0              | .0             | .0                      | .0          | .0                  | .0         | .0              | .0         |
| CALM               | .0   | .0        | .4   | .0        | .0   | .0              | .0   | .4              | .4             | 6.6                     | .8          | .0                  | 3.7        | .0              | 88.1       |
| TOT PCT            | 1.1  | .9        | .3   | .0        | .0   | .0              | .0   | 2.2             | .9             | 3.3                     | 1.4         | *                   | 2.2        | .4              | 89.7       |
| TOT OBS:           | 7177 |           |      |           |      |                 |      |                 |                |                         |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR<br>(GMT) | PRECIPITATION TYPE |              |      |              |      |                       |      | OTHER WEATHER PHENOMENA |                   |              |                   |                           |               |                       |              |                  |
|---------------|--------------------|--------------|------|--------------|------|-----------------------|------|-------------------------|-------------------|--------------|-------------------|---------------------------|---------------|-----------------------|--------------|------------------|
|               | RAIN               | RAIN<br>SHWR | DRZL | FRZG<br>PCPN | SNOW | OTHER<br>FRZN<br>PCPN | HAIL | PCPN AT<br>OB TIME      | PCPN PAST<br>HOUR | THDR<br>LTNG | FGG<br>WD<br>PCPN | FGG WD<br>PCPN<br>PAST HR | SMOKE<br>HAZE | SPRAY<br>BLWG<br>BLWG | DUST<br>SNOW | NO<br>SIG<br>WEA |
| 00003         | .8                 | .8           | .1   | .0           | .0   | .0                    | .0   | 1.7                     | .9                | 8.3          | 1.2               | .0                        | 1.9           | .5                    | 85.7         |                  |
| 06009         | 1.7                | 1.4          | .5   | .0           | .0   | .0                    | .0   | 3.6                     | .9                | 5.5          | 2.0               | .0                        | 1.5           | .4                    | 86.4         |                  |
| 12015         | .7                 | .9           | .3   | .0           | .0   | .0                    | .0   | 1.9                     | 1.5               | .3           | .9                | .0                        | 3.1           | .4                    | 91.9         |                  |
| 18021         | .8                 | .5           | .2   | .0           | .0   | .0                    | .0   | 1.5                     | .4                | 1.1          | 2.3               | .1                        | 2.6           | .3                    | 91.9         |                  |
| TOT PCT       | 1.0                | .9           | .3   | .0           | .0   | .0                    | .0   | 2.2                     | .9                | 3.7          | 1.6               | *                         | 2.3           | .4                    | 89.0         |                  |
| TOT OBS:      | 7620               |              |      |              |      |                       |      |                         |                   |              |                   |                           |               |                       |              |                  |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL<br>OBS | PCT<br>FREQ | MEAN<br>SPD | HOUR (GMT) |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|-------|--------------|-------------|-------------|------------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00    |              |             |             | 03         | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 2.8                | 21.4 | 14.8  | .7    | .0    | .0  | 39.8  | 9.9          | 38.5        | 39.8        | 38.8       | 38.0  | 39.5  | 45.0  | 42.8  | 39.8  |    |
| NE       | 1.3                | 11.4 | 9.4   | .7    | *     | .0  | 22.9  | 10.6         | 20.7        | 15.9        | 21.6       | 28.6  | 25.6  | 21.1  | 21.6  | 23.2  |    |
| E        | .6                 | 3.0  | 1.4   | .3    | *     | .0  | 5.3   | 9.3          | 4.5         | 4.5         | 5.1        | 6.4   | 7.3   | 4.7   | 3.9   | 4.5   |    |
| SE       | .5                 | 2.0  | .9    | .1    | *     | .0  | 3.5   | 8.7          | 2.9         | 2.2         | 4.2        | 4.9   | 4.1   | 2.6   | 3.0   | 2.1   |    |
| S        | .8                 | 2.3  | .8    | .2    | *     | .0  | 4.1   | 8.0          | 4.3         | 5.4         | 4.2        | 2.7   | 4.1   | 5.1   | 4.2   | 4.0   |    |
| SW       | .9                 | 2.7  | .5    | *     | .0    | .0  | 4.1   | 6.8          | 5.3         | 6.0         | 4.8        | 3.6   | 2.6   | 2.6   | 3.7   | 5.1   |    |
| W        | 1.2                | 3.8  | .4    | .0    | .0    | .0  | 5.4   | 5.9          | 5.8         | 4.6         | 6.1        | 4.5   | 4.6   | 6.4   | 5.6   | 5.4   |    |
| NW       | 1.7                | 8.0  | 1.6   | *     | .0    | .0  | 11.4  | 7.1          | 13.4        | 14.2        | 10.9       | 9.6   | 9.6   | 8.4   | 12.0  | 12.3  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0    | .0           | .0          | .0          | .0         | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 3.6                |      |       |       |       |     | 3.6   | .0           | 4.6         | 7.4         | 4.5        | 1.8   | 2.6   | 4.0   | 3.1   | 3.6   |    |
| TOT OBS  | 1691               | 6931 | 3766  | 262   | 5     | 0   | 12655 |              | 2481        | 162         | 2500       | 1144  | 2579  | 175   | 2464  | 1150  |    |
| TOT PCT  | 13.4               | 54.8 | 29.8  | 2.1   | *     | .0  |       | 100.0        | 100.0       | 100.0       | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | 0-6  | WIND SPEED (KNOTS) |       |       |       | 41+   | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |  |
|----------|------|--------------------|-------|-------|-------|-------|-----------|----------|----------|------------|-------|-------|--|
|          |      | 7-16               | 17-27 | 28-40 | 00 03 |       |           |          |          | 06 09      | 12 15 | 18 21 |  |
| N        | 11.3 | 24.2               | 4.3   | *     | .0    |       | 39.8      | 9.9      | 38.5     | 38.5       | 39.9  | 41.9  |  |
| NE       | 5.6  | 14.0               | 3.1   | .2    | .0    |       | 22.9      | 10.6     | 20.4     | 23.8       | 25.3  | 22.1  |  |
| E        | 2.0  | 2.6                | .6    | .1    | .0    |       | 5.3       | 9.3      | 4.5      | 5.5        | 7.2   | 4.1   |  |
| SE       | 1.5  | 1.7                | .3    | *     | .0    |       | 3.5       | 8.7      | 2.8      | 4.4        | 4.0   | 2.7   |  |
| S        | 2.2  | 1.5                | .4    | .1    | .0    |       | 4.1       | 8.0      | 4.4      | 3.7        | 4.2   | 4.1   |  |
| SW       | 2.4  | 1.5                | .2    | *     | .0    |       | 4.1       | 6.8      | 5.4      | 4.4        | 2.6   | 4.2   |  |
| W        | 3.6  | 1.8                | *     | .0    | .0    |       | 5.4       | 5.9      | 5.7      | 5.6        | 4.7   | 5.5   |  |
| NW       | 5.9  | 5.3                | .2    | .0    | .0    |       | 11.4      | 7.1      | 13.5     | 10.5       | 9.5   | 12.1  |  |
| VAR      | .0   | .0                 | .0    | .0    | .0    |       | .0        | .0       | .0       | .0         | .0    | .0    |  |
| CALM     | 3.6  |                    |       |       |       |       | 3.6       | .0       | 4.8      | 3.6        | 2.7   | 3.3   |  |
| TOT OBS  | 4809 | 6643               | 1158  | 45    | 0     | 12655 |           | 8.9      | 2643     | 3644       | 2794  | 3614  |  |
| TOT PCT  | 38.0 | 52.5               | 9.2   | .4    | .0    |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |  |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0008 DAKAR  
14.8N 18.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR | CALM | 1-3  | 4-10 | WIND SPEED (KNOTS) |       |       | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|------|------|------|------|--------------------|-------|-------|-----|------|----------|-----------|
|      |      |      |      | 11-21              | 22-33 | 34-47 |     |      |          |           |
| 0000 | 4.8  | 9.5  | 57.1 | 26.7               | 1.9   | .0    | .0  | 8.6  | 100.0    | 2643      |
| 0600 | 3.6  | 10.1 | 55.0 | 29.1               | 2.1   | .1    | .0  | 8.8  | 100.0    | 3644      |
| 1200 | 2.7  | 8.9  | 52.3 | 33.7               | 2.4   | .0    | .0  | 9.4  | 100.0    | 2754      |
| 1800 | 3.3  | 10.3 | 54.6 | 29.7               | 2.0   | .1    | .0  | 8.8  | 100.0    | 3614      |
| TOT  | 453  | 1238 | 6931 | 3766               | 262   | 5     | 0   | 8.9  |          | 12655     |
| PCT  | 3.6  | 9.8  | 54.8 | 29.8               | 2.1   | *     | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
|          |      |      |      |            |              |                        |
| N        | 23.2 | 7.5  | 8.5  | 3.7        |              | 2.8                    |
| NE       | 8.1  | 3.2  | 5.4  | 2.5        |              | 3.6                    |
| E        | 1.1  | .7   | 1.9  | 1.1        |              | 4.9                    |
| SE       | .4   | .4   | 1.5  | .8         |              | 5.6                    |
| S        | 1.2  | .5   | 1.5  | .9         |              | 4.6                    |
| SW       | 1.5  | .7   | .8   | .7         |              | 3.8                    |
| W        | 2.7  | 1.5  | 1.1  | .4         |              | 3.0                    |
| NW       | 6.8  | 2.2  | 2.2  | 1.2        |              | 2.8                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | 1.9  | .6   | .8   | .4         |              | 3.0                    |
| TOT OBS  | 2627 | 972  | 1329 | 656        | 5584         | 3.3                    |
| TOT PCT  | 47.0 | 17.4 | 23.8 | 11.7       | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3999 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+<br>ANY HGT | NH <5/8<br>TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------------------|
|         |            |            |            |            |              |              |              |              |              |                  |                         |
| N       | *          | *          | *          | .4         | 1.7          | 1.3          | .6           | .3           | .3           | 1.3              | 36.8                    |
| NE      | *          | *          | *          | .3         | 1.4          | .9           | .6           | .3           | .1           | .5               | 14.9                    |
| E       | .1         | .0         | .1         | .3         | .7           | .3           | .2           | .1           | .0           | .2               | 3.0                     |
| SE      | .0         | *          | .0         | .2         | .5           | .3           | .1           | .1           | .0           | .1               | 1.9                     |
| S       | *          | .0         | .0         | .3         | .5           | .4           | .2           | .1           | *            | .1               | 2.6                     |
| SW      | *          | .0         | *          | .2         | .3           | .2           | .1           | .1           | .0           | .1               | 2.7                     |
| W       | .0         | .0         | *          | .1         | .3           | .2           | *            | *            | *            | *                | 5.1                     |
| NW      | *          | *          | *          | .2         | .5           | .4           | .1           | .1           | .1           | .3               | 10.6                    |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0               | .0                      |
| CALM    | .0         | .0         | .0         | *          | .1           | .2           | .1           | *            | *            | .1               | 3.1                     |
| TOT OBS | 16         | 6          | 12         | 104        | 337          | 231          | 110          | 62           | 38           | 157              | 5584                    |
| TOT PCT | .3         | .1         | .2         | 1.9        | 6.0          | 4.1          | 2.0          | 1.1          | .7           | 2.8              | 100.0                   |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM) |      |      |      |      |      |       |      |
|-------------------|-----------|------|------|------|------|------|-------|------|
|                   | >10       | >5   | >2   | >1   | >1/2 | >1/4 | >50YD | >0   |
| >6500             | 2.9       | 3.4  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5   | 3.5  |
| >5000             | 3.8       | 4.5  | 4.6  | 4.6  | 4.6  | 4.6  | 4.6   | 4.6  |
| >3500             | 5.5       | 6.4  | 6.5  | 6.5  | 6.5  | 6.5  | 6.5   | 6.5  |
| >2000             | 9.2       | 10.5 | 10.7 | 10.7 | 10.7 | 10.7 | 10.7  | 10.7 |
| >1000             | 14.1      | 16.4 | 16.7 | 16.7 | 16.8 | 16.8 | 16.8  | 16.8 |
| >600              | 15.4      | 18.0 | 18.4 | 18.5 | 18.5 | 18.5 | 18.5  | 18.5 |
| >300              | 15.5      | 18.2 | 18.6 | 18.7 | 18.7 | 18.7 | 18.7  | 18.7 |
| >150              | 15.6      | 18.3 | 18.7 | 18.8 | 18.8 | 18.8 | 18.9  | 18.9 |
| >0                | 15.6      | 18.4 | 19.0 | 19.1 | 19.1 | 19.1 | 19.1  | 19.1 |
| TOTAL             | 919       | 1085 | 1118 | 1122 | 1123 | 1123 | 1124  | 1125 |

TOTAL NUMBER OF OBS: 5883

PCT FREQ NH <5/8: 80.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2    | 3   | 4   | 5   | 6   | 7   | 8   | OBS | TOTAL<br>OBS |
|------|------|------|-----|-----|-----|-----|-----|-----|-----|--------------|
| 37.5 | 14.1 | 13.5 | 8.6 | 6.1 | 3.7 | 4.6 | 4.2 | 7.4 | .2  | 6150         |

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

OCTOBER

AREA 0008 DAKAR  
14.8N 18.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | *    | *   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | .0   | .0   | *   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %  | .0   | *    | *   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
| 1/2<1        | PCP    | .0   | *    | .0  | *   | *   | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | NO PCP | .4   | .1   | *   | .0  | .0  | *   | .1  | .3   | .0  | .0   | .9    |              |
|              | TOT %  | .4   | .1   | *   | *   | *   | *   | .1  | .3   | .0  | .0   | .9    |              |
| 1<2          | PCP    | *    | .0   | *   | .0  | *   | *   | .0  | .0   | .0  | .0   | .1    |              |
|              | NO PCP | .1   | .1   | *   | *   | *   | *   | .1  | .1   | .0  | .0   | .5    |              |
|              | TOT %  | .1   | .1   | *   | *   | *   | *   | .1  | .1   | .0  | .0   | .6    |              |
| 2<5          | PCP    | *    | *    | .1  | *   | *   | *   | *   | *    | .0  | .0   | .3    |              |
|              | NO PCP | .3   | .2   | .1  | *   | *   | .0  | *   | .1   | .0  | .1   | .8    |              |
|              | TOT %  | .3   | .2   | .2  | .1  | *   | *   | *   | .1   | .0  | .1   | 1.1   |              |
| 5<10         | PCP    | .1   | .1   | .2  | .2  | .1  | .1  | *   | .1   | .0  | *    | .9    |              |
|              | NO PCP | 8.2  | 3.1  | .8  | .5  | .7  | .8  | 1.1 | 2.7  | .0  | .5   | 18.4  |              |
|              | TOT %  | 8.3  | 3.2  | 1.0 | .7  | .8  | 1.0 | 1.1 | 2.7  | .0  | .5   | 19.3  |              |
| 10+          | PCP    | .2   | .2   | .1  | .2  | .2  | .1  | *   | *    | .0  | .0   | .9    |              |
|              | NO PCP | 33.6 | 15.4 | 3.6 | 2.3 | 3.2 | 2.7 | 4.5 | 9.1  | .0  | 2.8  | 77.2  |              |
|              | TOT %  | 33.8 | 15.6 | 3.6 | 2.5 | 3.4 | 2.8 | 4.5 | 9.2  | .0  | 2.8  | 78.1  |              |
| TOT OBS      |        |      |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |        |      |      |     |     |     |     |     |      |     |      |       |              |
|              |        | 42.9 | 19.2 | 4.9 | 3.3 | 4.2 | 3.8 | 5.8 | 12.5 | .0  | 3.4  | 100.0 | 7166         |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 4-10       | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | 11-21      | .0   | *    | *   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | *   | .0  | *   | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %      | .0   | *    | *   | .0  | *   | .0  | .0  | .0   | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | *    | *    | .0  | .0  | *   | *   | *   | .1   | .0  | .0   | .1    |              |
|              | 4-10       | .1   | *    | *   | .0  | .0  | *   | *   | .2   | .0  | .0   | .4    |              |
|              | 11-21      | .1   | *    | *   | *   | *   | *   | *   | .0   | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0   | .0  | .0  | .0  | .0  | .0  | .0   | .0  | .0   | .0    |              |
|              | TOT %      | .3   | .1   | *   | *   | *   | *   | .1  | .2   | .0  | .0   | .7    |              |
| 1<2          | 0-3        | *    | *    | .0  | .0  | .0  | *   | *   | .1   | .0  | .1   | .2    |              |
|              | 4-10       | .1   | .1   | *   | *   | *   | *   | *   | .1   | .0  | .0   | .3    |              |
|              | 11-21      | *    | *    | *   | *   | *   | *   | .0  | .0   | .0  | .0   | .1    |              |
|              | 22+        | .0   | .0   | *   | .0  | .0  | .0  | .0  | .0   | .0  | .0   | *     |              |
|              | TOT %      | .1   | .1   | *   | *   | *   | *   | *   | .1   | .0  | .1   | .6    |              |
| 2<5          | 0-3        | .1   | *    | .0  | *   | *   | *   | *   | .1   | .0  | .1   | .4    |              |
|              | 4-10       | .2   | .2   | *   | *   | .1  | *   | .1  | .1   | .0  | .0   | .7    |              |
|              | 11-21      | .1   | .2   | .1  | *   | .0  | *   | *   | .0   | .0  | .0   | .4    |              |
|              | 22+        | .0   | *    | *   | *   | *   | .0  | .0  | .0   | .0  | .0   | .1    |              |
|              | TOT %      | .4   | .4   | .2  | .1  | .1  | .1  | .1  | .2   | .0  | .1   | 1.6   |              |
| 5<10         | 0-3        | .7   | .3   | .1  | .1  | .1  | .2  | .2  | .6   | .0  | .6   | 2.7   |              |
|              | 4-10       | 4.3  | 1.8  | .5  | .4  | .4  | .5  | .7  | 1.6  | .0  | .0   | 10.1  |              |
|              | 11-21      | 2.7  | 1.4  | .4  | .2  | .2  | .1  | .1  | .3   | .0  | .0   | 5.4   |              |
|              | 22+        | .1   | .1   | *   | *   | .1  | *   | .0  | *    | .0  | .0   | .3    |              |
|              | TOT %      | 7.7  | 3.5  | .9  | .7  | .8  | .9  | 1.0 | 2.5  | .0  | .6   | 18.5  |              |
| 10+          | 0-3        | 2.2  | .9   | .6  | .3  | .6  | .6  | .9  | 1.3  | .0  | 3.0  | 10.3  |              |
|              | 4-10       | 17.7 | 8.7  | 2.3 | 1.4 | 1.8 | 1.9 | 3.1 | 6.5  | .0  | .0   | 43.6  |              |
|              | 11-21      | 12.8 | 7.0  | .7  | .6  | .7  | .3  | .3  | 1.2  | .0  | .0   | 23.5  |              |
|              | 22+        | .5   | .3   | *   | .1  | .1  | *   | .0  | *    | .0  | .0   | 1.1   |              |
|              | TOT %      | 33.2 | 17.0 | 3.6 | 2.4 | 3.2 | 2.8 | 4.3 | 9.0  | .0  | 3.0  | 78.5  |              |
| TOT OBS      |            |      |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |            |      |      |     |     |     |     |     |      |     |      |       |              |
|              |            | 41.8 | 21.1 | 4.8 | 3.2 | 4.1 | 3.8 | 5.5 | 12.1 | .0  | 3.7  | 100.0 | 9357         |

## OCTOBER

PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

TABLE 10

AREA 0008 DAKAR  
14.8N 18.0WPERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND  
OCCURRENCE OF NH <5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003          | .3         | .1         | .1         | 2.0        | 5.6          | 3.2          | 1.3          | 1.1          | .4           | 2.2   | 16.2  | 83.8               | 1451         |
| 06009          | .6         | .1         | .3         | 2.0        | 7.0          | 5.1          | 1.9          | 1.5          | .6           | 2.8   | 22.0  | 78.0               | 1448         |
| 12015          | .1         | .1         | .3         | 1.5        | 6.2          | 3.4          | 2.0          | .8           | .7           | 2.8   | 18.1  | 81.9               | 1634         |
| 18021          | .1         | .1         | .1         | 1.5        | 4.6          | 4.7          | 2.2          | 1.1          | .8           | 3.2   | 18.4  | 81.6               | 1507         |
| TOT            | 16         | 6          | 13         | 105        | 355          | 247          | 113          | 67           | 39           | 166   | 1127  | 4913               | 6040         |
| PCT            | .3         | .1         | .2         | 1.7        | 5.9          | 4.1          | 1.9          | 1.1          | .6           | 2.7   | 18.7  | 81.3               | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|----------------|------|-------|-----|-----|------|------|--------------|
| 00003          | .1   | .7    | .5  | 1.7 | 18.3 | 78.8 | 2220         |
| 06009          | .0   | 1.1   | .6  | 1.3 | 21.4 | 75.5 | 2637         |
| 12015          | *    | .5    | .6  | 1.5 | 15.2 | 82.2 | 2297         |
| 18021          | *    | 1.0   | .8  | 1.8 | 19.7 | 76.8 | 2646         |
| TOT            | 4    | 83    | 61  | 153 | 1839 | 7660 | 9800         |
| PCT            | *    | .8    | .6  | 1.6 | 18.8 | 78.2 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NH) AND/OR  
CEILING HGT (FEET, NH >4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50YD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH <5/8<br>AND 5+ | TOTAL<br>OBS |
|----------------|---------------|------------|-------------|-----------------|-------------------|--------------|
| 00003          | .3            | .4         | 3.3         | 14.0            | 82.8              | 1415         |
| 06009          | .6            | 1.1        | 3.9         | 19.3            | 76.8              | 1397         |
| 12015          | .1            | .6         | 3.0         | 16.1            | 80.9              | 1594         |
| 18021          | .1            | .4         | 3.0         | 16.3            | 80.7              | 1477         |
| TOT            | 16            | 37         | 193         | 964             | 4726              | 5883         |
| PCT            | .3            | .6         | 3.3         | 16.4            | 80.3              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | .0    | .1    | .3    | .1    | .1    | .0     | 38           | .6          |
| 85/89  | .0   | .0    | .1    | .3    | 2.1   | 5.0   | 1.4   | .3     | 575          | 9.4         |
| 80/84  | .0   | .0    | *     | .7    | 5.8   | 28.2  | 28.9  | 4.5    | 4187         | 68.2        |
| 75/79  | .0   | .0    | .0    | .1    | 1.1   | 6.5   | 9.9   | 3.6    | 1303         | 21.2        |
| 70/74  | .0   | .0    | .0    | .0    | *     | .2    | .2    | .2     | 39           | .6          |
| TOT    | 0    | 0     | 11    | 75    | 577   | 2454  | 2488  | 537    | 6142         | 100.0       |
| PCT    | .0   | .0    | .2    | 1.2   | 9.4   | 40.0  | 40.5  | 8.7    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|------|-----|------|
| 90/94 | .3   | .1   | *   | *   | *   | .0  | .1  | *    | .0  | *    |
| 85/89 | 4.4  | 1.6  | .4  | .1  | .3  | .3  | .6  | 1.3  | .0  | .4   |
| 80/84 | 27.1 | 12.8 | 3.2 | 2.1 | 3.0 | 2.9 | 4.6 | 9.9  | .0  | 2.6  |
| 75/79 | 10.9 | 4.8  | 1.2 | .9  | .8  | .6  | .4  | 1.2  | .0  | .4   |
| 70/74 | .3   | .2   | *   | *   | *   | *   | .0  | *    | .0  | *    |
| TOT   | 43.0 | 19.5 | 4.8 | 3.2 | 4.1 | 3.8 | 5.7 | 12.5 | .0  | 3.4  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 91  | 84  | 83  | 81  | 76 | 73 | 66  | 80.3 | 2775         |
| 06009          | 92  | 85  | 83  | 80  | 75 | 73 | 66  | 80.0 | 3753         |
| 12015          | 95  | 90  | 88  | 83  | 78 | 75 | 65  | 82.8 | 2775         |
| 18021          | 95  | 89  | 86  | 82  | 77 | 74 | 66  | 81.9 | 3647         |
| TOT            | 95  | 89  | 86  | 81  | 76 | 74 | 65  | 81.2 | 12950        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOURL<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|----------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003          | .0   | .6    | 3.8   | 30.8  | 54.0  | 10.8   | 82   | 1596         |
| 06009          | .0   | .7    | 4.9   | 30.1  | 50.8  | 13.5   | 82   | 1626         |
| 12015          | .0   | 2.4   | 17.4  | 49.7  | 25.5  | 5.0    | 76   | 1649         |
| 18021          | .0   | 1.6   | 10.9  | 49.2  | 32.6  | 5.8    | 78   | 1630         |
| TOT            | 0    | 88    | 603   | 2602  | 2639  | 569    | 79   | 6501         |



PERIOD: (PRIMARY) 1922-1973  
(OVER-ALL) 1854-1973

# OCTOBER

AREA 0008 DAKAR  
14.8N 18.0W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | #<br>FOG | MO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | *        | *        | .0       | .0  | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .1       | *        | *        | *   | 13    | .0       | .2        |
| 9/10               | .0       | .0       | *        | .1       | .1       | .1       | *   | 24    | *        | .3        |
| 7/8                | .0       | .0       | .1       | .2       | .2       | .2       | .0  | 50    | .0       | .7        |
| 6                  | .0       | .0       | .1       | .2       | .2       | .2       | .0  | 45    | *        | .7        |
| 5                  | .0       | .0       | .1       | .3       | .9       | .2       | .0  | 103   | *        | 1.5       |
| 4                  | .0       | .1       | .3       | .9       | 1.2      | .1       | .0  | 165   | *        | 2.4       |
| 3                  | .0       | *        | .2       | 1.6      | 1.5      | *        | .0  | 229   | .1       | 3.4       |
| 2                  | .0       | *        | .5       | 4.9      | 1.9      | *        | .0  | 500   | .2       | 7.3       |
| 1                  | .0       | .1       | 1.5      | 9.4      | 1.5      | .0       | .0  | 842   | .1       | 12.4      |
| 0                  | *        | .2       | 3.7      | 13.3     | .9       | .0       | .0  | 1209  | .3       | 17.7      |
| -1                 | .0       | .3       | 6.6      | 13.7     | .4       | .0       | .0  | 1400  | .3       | 20.6      |
| -2                 | *        | .4       | 6.9      | 7.1      | *        | .0       | .0  | 974   | .4       | 14.2      |
| -3                 | *        | .7       | 4.9      | 2.9      | .1       | .0       | .0  | 578   | .1       | 8.5       |
| -4                 | *        | .5       | 2.7      | .8       | *        | .0       | .0  | 272   | *        | 4.0       |
| -5                 | *        | .4       | 1.5      | .4       | .0       | .0       | .0  | 152   | .0       | 2.3       |
| -6                 | *        | .3       | .6       | .1       | .0       | .0       | .0  | 69    | .0       | 1.0       |
| -7/-8              | *        | .4       | .3       | .2       | .0       | .0       | .0  | 59    | *        | .9        |
| -9/-10             | *        | .1       | .1       | .0       | .0       | .0       | .0  | 14    | .0       | .2        |
| -11/-13            | *        | *        | *        | .0       | .0       | .0       | .0  | 3     | .0       | *         |
| TOTAL              | 14       | 232      | 2017     | 3773     | 603      | 61       | 3   | 6703  | 105      | 6598      |
| PCT                | .2       | 3.5      | 30.1     | 56.3     | 9.0      | .9       | *   | 100.0 | 1.6      | 98.4      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| N       |     |      |       |       |       |     |      |     |      |       | NE    |       |     |      |     |      |       |       |       |     |      |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
| <1      | 1.3 | 4.0  | .2    | .0    | .0    | .0  | 5.4  | .5  | 1.5  | .1    | .0    | .0    | .0  | 2.1  | .4  | 1.5  | .1    | .0    | .0    | .0  | 2.1  |
| 1-2     | 1.0 | 13.6 | 4.9   | .0    | .0    | .0  | 19.6 | .5  | 4.6  | 1.9   | .0    | .0    | .0  | 7.0  | .4  | 4.6  | 1.9   | .0    | .0    | .0  | 7.0  |
| 3-4     | .1  | 5.0  | 7.5   | .1    | .0    | .0  | 12.8 | .1  | 2.4  | 3.4   | .1    | .0    | .0  | 5.9  | .1  | 2.4  | 3.4   | .1    | .0    | .0  | 5.9  |
| 5-6     | *   | .7   | 4.5   | .2    | .0    | .0  | 5.3  | .0  | .4   | 1.8   | .1    | .0    | .0  | 2.3  | .0  | .4   | 1.8   | .1    | .0    | .0  | 2.3  |
| 7       | .0  | .2   | 1.4   | .3    | .0    | .0  | 1.8  | .0  | *    | .4    | .1    | .0    | .0  | .5   | .0  | *    | .4    | .1    | .0    | .0  | .5   |
| 8-9     | .0  | .0   | .2    | .2    | .0    | .0  | .4   | .0  | *    | .1    | .1    | .0    | .0  | .2   | .0  | *    | .1    | .1    | .0    | .0  | .2   |
| 10-11   | .0  | .0   | *     | .1    | .0    | .0  | .1   | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 2.4 | 23.5 | 18.7  | .8    | .0    | .0  | 45.4 | 1.1 | 9.0  | 7.7   | .4    | .0    | .0  | 18.1 | 1.1 | 9.0  | 7.7   | .4    | .0    | .0  | 18.1 |

| E       |     |      |       |       |       |     |     |     |      |       | SE    |       |     |     |     |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .2  | .3   | *     | .0    | .0    | .0  | .5  | .2  | .3   | *     | .0    | .0    | .0  | .6  | .2  | .3   | *     | .0    | .0    | .0  | .6  |
| 1-2     | .2  | 1.2  | .3    | .0    | .0    | .0  | 1.7 | .2  | .7   | .2    | .0    | .0    | .0  | 1.0 | .2  | .7   | .2    | .0    | .0    | .0  | 1.0 |
| 3-4     | .0  | .5   | .5    | .1    | .0    | .0  | 1.1 | *   | .4   | .2    | .0    | .0    | .0  | .6  | .0  | .5   | .5    | .1    | .0    | .0  | .6  |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .2  | .0  | *    | .2    | .0    | .0    | .0  | .2  | .0  | *    | .2    | .0    | .0    | .0  | .2  |
| 7       | .0  | .1   | *     | .1    | .0    | .0  | .2  | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | *     | .0    | .0  | *   |
| 8-9     | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | .0   | *     | *     | .0    | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .1    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .4  | 2.1  | 1.1   | .2    | .0    | .0  | 3.8 | .4  | 1.4  | .6    | *     | .0    | .0  | 2.5 | .4  | 1.4  | .6    | *     | .0    | .0  | 2.5 |

PERIOD: (OVER-ALL) 1963-1973

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .4  | .4   | *     | .0    | .0    | .0  | .9  | .4  | .5   | .0    | .0    | .0    | .0  | .9  |
| 1-2     | .1  | 1.2  | .4    | .0    | .0    | .0  | 1.7 | .2  | 1.6  | .1    | .0    | .0    | .0  | 1.9 |
| 3-4     | *   | .6   | .3    | *     | .0    | .0  | 1.0 | *   | .4   | .2    | *     | .0    | .0  | .7  |
| 5-6     | .0  | .2   | .2    | .1    | .0    | .0  | .5  | .0  | .1   | .1    | *     | .0    | .0  | .3  |
| 7       | .0  | *    | *     | *     | .0    | .0  | .1  | .0  | .1   | *     | *     | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .1  | .0  | .0   | *     | *     | .0    | .0  | .1  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | *     | *     | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .5  | 2.5  | 1.0   | .3    | *     | .0  | 4.4 | .6  | 2.7  | .5    | .1    | .0    | .0  | 4.0 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .4  | 1.2  | *     | .0    | .0    | .0  | 1.6 | .7  | 1.7  | .1    | .0    | .0    | .0  | 2.6  |           |
| 1-2     | .6  | 2.5  | .1    | .0    | .0    | .0  | 3.3 | .6  | 5.3  | .5    | .0    | .0    | .0  | 6.3  |           |
| 3-4     | .0  | .5   | .3    | .0    | .0    | .0  | .8  | .1  | 1.5  | .6    | .0    | .0    | .0  | 2.2  |           |
| 5-6     | .0  | *    | .1    | .0    | .0    | .0  | .1  | .0  | .1   | .3    | .0    | .0    | .0  | .4   |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .1    | .0    | .0    | .0  | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | 1.0 | 4.3  | .5    | .0    | .0    | .0  | 5.8 | 1.5 | 8.6  | 1.6   | *     | .0    | .0  | 11.7 | 95.7      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3  | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|------|------|-------|-------|-------|-----|-------|---------|
| <1      | 10.2 | 10.1 | .4    | .0    | .0    | .0  | 20.8  |         |
| 1-2     | 3.7  | 30.2 | 8.1   | .0    | .0    | .0  | 42.0  |         |
| 3-4     | .4   | 11.0 | 12.6  | .4    | .0    | .0  | 24.3  |         |
| 5-6     | *    | 1.4  | 7.1   | .5    | .0    | .0  | 9.0   |         |
| 7       | .0   | .4   | 1.9   | .6    | .0    | .0  | 2.9   |         |
| 8-9     | .0   | *    | .4    | .3    | .0    | .0  | .8    |         |
| 10-11   | .0   | .0   | .1    | .1    | .0    | .0  | .1    |         |
| 12      | .0   | .0   | *     | *     | .0    | .0  | .1    |         |
| 13-16   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0   | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 14.4 | 53.1 | 30.6  | 1.9   | *     | .0  | 100.0 | 3679    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7   | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|-----|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.9 | 14.8 | 13.9 | 5.3  | 2.0 | .3  | .3    | .1 | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1831     |
| 6-7          | *   | 2.1  | 7.0  | 7.4  | 3.3 | 1.1 | .7    | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 1015     |
| 8-9          | .0  | 1.0  | 3.1  | 2.3  | 2.1 | .8  | .4    | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 504      |
| 10-11        | .0  | .7   | .8   | .9   | 1.0 | .3  | .1    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 182      |
| 12-13        | .0  | .0   | 1.3  | .6   | .2  | .2  | *     | *  | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 107      |
| >13          | .0  | .0   | .0   | .4   | .3  | *   | .0    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 32       |
| INDET        | 6.2 | 6.0  | 5.1  | 2.4  | .5  | .2  | .1    | .0 | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 957      |
| TOTAL        | 426 | 1136 | 1444 | 933  | 434 | 139 | 80    | 19 | 12    | 5     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 0     | 4628     |
| PCT          | 9.2 | 24.5 | 31.2 | 20.2 | 9.4 | 3.0 | 1.7   | .4 | .3    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | .0    | 100.0    |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

NOVEMBER

AREA 0008 DAKAR  
14.0N 18.0W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | .1        | *    | .0        | .0   | .0              | *    | .3                      | .1             | .5        | .7          | .0                  | 2.4        | .4              | 95.5       |
| NE       | .1                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .2             | .2        | 1.7         | .0                  | 3.1        | .9              | 93.7       |
| E        | .6                 | 1.2       | .0   | .0        | .0   | .0              | .0   | 1.7                     | .0             | .6        | 2.1         | .0                  | 5.1        | 3.2             | 87.5       |
| SE       | 1.0                | 3.9       | 2.9  | .0        | .0   | .0              | .0   | 7.8                     | .0             | 2.9       | 3.9         | .0                  | .5         | .0              | 85.9       |
| S        | 2.2                | .0        | 3.3  | .0        | .0   | .0              | .0   | 5.5                     | .0             | 4.4       | .0          | .0                  | 3.3        | .0              | 86.7       |
| SW       | .0                 | 2.6       | .0   | .0        | .0   | .0              | .0   | 2.6                     | .0             | 7.7       | .0          | .0                  | .0         | .0              | 89.1       |
| W        | .0                 | 1.1       | .0   | .0        | .0   | .0              | .0   | 1.1                     | .0             | .0        | .0          | .0                  | .0         | .0              | 98.9       |
| NW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .3             | 3.0       | 1.2         | .0                  | 2.1        | .1              | 93.3       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .8                 | .0        | .0   | .0        | .0   | .0              | .0   | .8                      | 2.3            | .0        | 1.5         | .0                  | 5.4        | .8              | 89.2       |
| TOT PCT  | .2                 | .2        | .1   | .0        | .0   | .0              | *    | .5                      | .2             | .7        | 1.1         | .0                  | 2.7        | .7              | 94.3       |
| TOT OBS: | 6456               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT OB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .3                 | .2        | .1   | .0        | .0   | .0              | .0   | .6                      | .2             | 1.7       | .8          | .0                  | 2.5        | .4              | 93.7       |
| 06009      | .1                 | .3        | .1   | .0        | .0   | .0              | .0   | .5                      | .3             | .9        | 1.6         | .0                  | 2.2        | .6              | 94.0       |
| 12015      | .0                 | .1        | .1   | .0        | .0   | .0              | .0   | .1                      | .2             | .0        | .6          | .0                  | 3.3        | .8              | 94.9       |
| 18021      | .3                 | .3        | .1   | .0        | .0   | .0              | .1   | .7                      | .0             | .4        | 1.4         | .0                  | 2.8        | .7              | 94.1       |
| TOT PCT    | .2                 | .2        | .1   | .0        | .0   | .0              | *    | .5                      | .2             | .7        | 1.1         | .0                  | 2.7        | .6              | 94.2       |
| TOT OBS:   | 6681               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |  |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|--|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00    |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |  |
| N        | 2.4                | 23.1 | 19.0  | .7    | .0    | .0  |       | 45.1      | 10.4     | 48.4     | 55.2       | 47.7  | 37.5  | 40.6  | 58.5  | 47.7  | 42.0  |  |
| NE       | 1.2                | 16.9 | 16.9  | 1.5   | .0    | .0  |       | 36.4      | 11.4     | 30.3     | 25.5       | 34.3  | 46.8  | 42.5  | 27.2  | 34.2  | 37.3  |  |
| E        | .4                 | 3.2  | 1.9   | .3    | .0    | .0  |       | 5.8       | 10.2     | 4.5      | 1.4        | 5.1   | 6.6   | 7.9   | 2.7   | 5.5   | 6.5   |  |
| SE       | .2                 | .7   | .1    | *     | .0    | .0  |       | 1.1       | 7.0      | .9       | 1.6        | .7    | 1.3   | 1.2   | .0    | 1.0   | 1.8   |  |
| S        | .3                 | .5   | .1    | .0    | .0    | .0  |       | .9        | 5.1      | 1.3      | .5         | .6    | .8    | .7    | .5    | 1.0   | .9    |  |
| SW       | .4                 | .6   | .1    | *     | .0    | .0  |       | 1.1       | 5.3      | 1.4      | 1.4        | 1.0   | 1.2   | .8    | .8    | .9    | 1.4   |  |
| W        | .5                 | 1.1  | .1    | .0    | .0    | .0  |       | 1.6       | 5.0      | 2.4      | .0         | 1.8   | 1.2   | 1.0   | 1.3   | 1.8   | 1.4   |  |
| NW       | .9                 | 3.9  | .8    | *     | .0    | .0  |       | 5.7       | 7.1      | 7.9      | 9.0        | 6.0   | 3.2   | 3.9   | 5.7   | 5.8   | 5.8   |  |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |  |
| CALM     | 2.3                |      |       |       |       |     |       | 2.3       | .0       | 2.9      | 5.5        | 2.7   | 1.4   | 1.3   | 3.3   | 2.1   | 3.0   |  |
| TOT OBS  | 1047               | 6073 | 4723  | 310   | 0     | 0   | 12153 |           | 10.1     | 2356     | 145        | 2448  | 1114  | 2496  | 150   | 2305  | 1139  |  |
| TOT PCT  | 8.6                | 50.0 | 38.9  | 2.6   | .0    | .0  |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |  |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 09    | 15 |
| N        | 10.2               | 29.7 | 5.2   | .1    | .0  | 45.1      | 10.4     | 48.8     | 44.5       | 41.6  | 45.8  |    |
| NE       | 6.5                | 23.2 | 6.4   | .3    | .0  | 36.4      | 11.4     | 30.0     | 38.2       | 41.6  | 35.2  |    |
| E        | 1.7                | 3.4  | .7    | .1    | .0  | 5.8       | 10.2     | 4.3      | 5.6        | 7.6   | 5.8   |    |
| SE       | .6                 | .4   | *     | .0    | .0  | 1.1       | 7.0      | 1.0      | .9         | 1.2   | 1.3   |    |
| S        | .6                 | .2   | *     | .0    | .0  | .9        | 5.1      | 1.2      | .7         | .7    | 1.0   |    |
| SW       | 1.8                | .3   | *     | .0    | .0  | 1.1       | 5.3      | 1.4      | 1.0        | .8    | 1.1   |    |
| W        | 1.3                | .3   | *     | .0    | .0  | 1.6       | 5.0      | 2.3      | 1.6        | 1.0   | 1.7   |    |
| NW       | 2.8                | 2.7  | .1    | .0    | .0  | 5.7       | 7.1      | 8.0      | 5.1        | 4.0   | 5.8   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  | .0        | .0       | .0       | .0         | .0    | .0    |    |
| CALM     | 2.3                |      |       |       |     | 2.3       | .0       | 3.1      | 2.3        | 1.4   | 2.4   |    |
| TOT OBS  | 3264               | 7320 | 1519  | 50    | 0   | 12153     |          | 2501     | 3562       | 2646  | 3444  |    |
| TOT PCT  | 26.9               | 60.2 | 12.5  | .4    | .0  | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1834-1973

# NOVEMBER

AREA 0008 DAKAR  
14.8N 18.0W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       |     | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 | 48+ |       |          |           |
| 00003 | 3.1  | 7.2 | 53.3 | 34.5               | 2.0   | .0    | .0  | 9.5   | 100.0    | 2501      |
| 06009 | 2.3  | 5.8 | 50.1 | 39.2               | 2.6   | .0    | .0  | 10.2  | 100.0    | 3562      |
| 12015 | 1.4  | 5.0 | 45.5 | 44.9               | 3.2   | .0    | .0  | 10.9  | 100.0    | 2646      |
| 18021 | 2.4  | 7.3 | 50.9 | 37.0               | 2.4   | .0    | .0  | 9.9   | 100.0    | 3444      |
| TOT   | 279  | 768 | 6073 | 4723               | 310   | 0     | 0   | 10.1  |          | 12153     |
| PCT   | 2.3  | 6.3 | 50.0 | 38.9               | 2.6   | .0    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 32.4 | 8.2  | 10.0 | 4.8          |              | 2.6                    |
| NE       | 14.7 | 4.1  | 6.2  | 3.1          |              | 3.0                    |
| E        | 2.0  | .5   | .8   | .5           |              | 3.1                    |
| SE       | .3   | .1   | .2   | .1           |              | 3.5                    |
| S        | .3   | .2   | .1   | .1           |              | 3.0                    |
| SW       | .3   | .1   | .1   | .1           |              | 3.5                    |
| W        | .8   | .2   | .4   | .1           |              | 2.9                    |
| NW       | 4.1  | 1.0  | 1.2  | .7           |              | 2.6                    |
| VAR      | .0   | .0   | .0   | .0           |              | .0                     |
| CALM     | 1.5  | .2   | .3   | .2           |              | 2.1                    |
| TOT OBS  | 2914 | 749  | 1001 | 503          | 5167         | 2.7                    |
| TOT PCT  | 56.4 | 14.5 | 19.4 | 9.7          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8 | TOTAL |
|-----|-----|-----|-----|------|------|------|------|------|-------|---------|-------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       | ANY HGT | OBS   |
| .1  | .0  | .1  | .4  | 1.4  | 2.1  | .9   | .4   | .4   | 1.8   | 47.8    |       |
| .0  | .0  | .1  | .3  | .9   | 1.0  | .5   | .4   | .4   | 1.2   | 23.3    |       |
| .0  | .0  | .0  | .1  | .1   | .1   | .1   | .1   | .1   | .2    | 3.1     |       |
| .0  | .0  | .0  | .0  | .0   | .1   | .1   | .0   | .0   | .0    | .5      |       |
| .0  | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .0    | .5      |       |
| .0  | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .1    | 1.3     |       |
| .0  | .0  | .0  | .1  | .2   | .3   | .1   | .0   | .0   | .2    | 6.1     |       |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0      |       |
| .0  | .0  | .0  | .0  | .1   | .1   | .0   | .0   | .0   | .1    | 1.8     |       |
| .5  | 1   | 11  | 45  | 156  | 192  | 91   | 49   | 44   | 184   | 4389    | 5167  |
| .1  | .0  | .2  | .9  | 3.0  | 3.7  | 1.8  | .9   | .9   | 3.6   | 84.9    | 100.0 |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | = OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
| = OR >6500        | 3.5         | 4.2        | 4.3        | 4.3        | 4.3          | 4.3          | 4.3           | 4.3        |
| = OR >5000        | 4.4         | 5.1        | 5.2        | 5.2        | 5.2          | 5.2          | 5.2           | 5.2        |
| = OR >3500        | 5.9         | 6.9        | 7.0        | 7.0        | 7.0          | 7.0          | 7.0           | 7.0        |
| = OR >2000        | 9.1         | 10.5       | 10.7       | 10.7       | 10.7         | 10.7         | 10.7          | 10.7       |
| = OR >1000        | 11.9        | 13.6       | 13.8       | 13.8       | 13.8         | 13.8         | 13.8          | 13.8       |
| = OR >600         | 12.7        | 14.4       | 14.7       | 14.7       | 14.7         | 14.7         | 14.7          | 14.7       |
| = OR >300         | 12.9        | 14.6       | 14.9       | 14.9       | 14.9         | 14.9         | 14.9          | 14.9       |
| = OR >150         | 12.9        | 14.7       | 14.9       | 14.9       | 14.9         | 14.9         | 14.9          | 14.9       |
| = OR >0           | 12.9        | 14.8       | 15.0       | 15.0       | 15.0         | 15.0         | 15.0          | 15.0       |
| TOTAL             | 691         | 788        | 800        | 800        | 801          | 801          | 802           | 802        |

TOTAL NUMBER OF OBS: 5340

PCT FREQ NH <5/8: 85.0

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|--------------|
| 53.0 | 12.3 | 9.0 | 5.1 | 4.7 | 3.2 | 3.4 | 3.3 | 5.9 | .1    | 5576         |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

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14.8N 18.0W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | *    | *    | .0  | .0 | .0 | .0 | .0  | *   | .0  | .0   | *     |              |
|              | TOT %  | *    | *    | .0  | .0 | .0 | .0 | .0  | *   | .0  | .0   | *     |              |
| 1/2<1        | PCP    | *    | *    | *   | *  | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .1   | .3   | .1  | *  | .0 | .0 | .0  | .0  | .0  | .0   | .5    |              |
|              | TOT %  | .1   | .3   | .1  | *  | .0 | .0 | .0  | .0  | .0  | .0   | .6    |              |
| 1<2          | PCP    | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | NO PCP | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
|              | TOT %  | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
| 2<5          | PCP    | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | NO PCP | .7   | .6   | .2  | *  | .0 | .0 | *   | *   | .0  | .1   | 1.6   |              |
|              | TOT %  | .7   | .6   | .2  | *  | .0 | .0 | *   | *   | .0  | .1   | 1.6   |              |
| 5<10         | PCP    | *    | .0   | *   | *  | *  | *  | .0  | .0  | .0  | *    | .1    |              |
|              | NO PCP | 7.8  | 5.2  | .7  | .2 | .1 | .1 | .1  | .8  | .0  | .3   | 15.2  |              |
|              | TOT %  | 7.8  | 5.2  | .7  | .2 | .1 | .1 | .1  | .8  | .0  | .3   | 15.3  |              |
| 10+          | PCP    | .1   | .1   | .0  | *  | *  | .0 | *   | .0  | .0  | .0   | .3    |              |
|              | NO PCP | 45.5 | 23.1 | 3.0 | .5 | .6 | .5 | 1.3 | 6.0 | .0  | 1.6  | 82.0  |              |
|              | TOT %  | 45.6 | 23.2 | 3.0 | .6 | .6 | .5 | 1.3 | 6.0 | .0  | 1.6  | 82.3  |              |
| TOT OBS      |        | 6448 |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |        | 54.4 | 29.4 | 4.0 | .8 | .7 | .6 | 1.4 | 6.8 | .0  | 2.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|-----|----|----|----|-----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | 11-21      | .0   | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | *    | *    | .0  | .0 | .0 | .0 | .0  | *   | .0  | .0   | *     |              |
| 1/2<1        | 0-3        | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    |              |
|              | 4-10       | *    | .1   | *   | *  | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
|              | 11-21      | *    | .1   | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
|              | 22+        | .0   | *    | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | TOT %      | .1   | .2   | .1  | *  | .0 | .0 | .0  | .0  | .0  | .0   | .4    |              |
| 1<2          | 0-3        | *    | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | *    | *     |              |
|              | 4-10       | *    | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | *     |              |
|              | 11-21      | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .2    |              |
|              | 22+        | .0   | .0   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .0    |              |
|              | TOT %      | .1   | .1   | .0  | .0 | .0 | .0 | .0  | .0  | .0  | *    | .2    |              |
| 2<5          | 0-3        | *    | *    | *   | *  | *  | .0 | *   | *   | .0  | .1   | .2    |              |
|              | 4-10       | .4   | .2   | .1  | *  | .0 | .0 | *   | *   | .0  | .0   | .7    |              |
|              | 11-21      | .2   | .3   | .1  | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .7    |              |
|              | 22+        | *    | *    | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .7   | .6   | .2  | *  | *  | .0 | *   | .1  | .0  | .1   | 1.7   |              |
| 5<10         | 0-3        | .4   | .3   | .1  | *  | *  | .1 | *   | .1  | .0  | .4   | 1.5   |              |
|              | 4-10       | 3.7  | 2.5  | .4  | .1 | .1 | .1 | .1  | .6  | .0  | .0   | 7.5   |              |
|              | 11-21      | 3.1  | 2.6  | .3  | *  | *  | *  | *   | .1  | .0  | .0   | 6.3   |              |
|              | 22+        | .1   | .2   | *   | .0 | .0 | .0 | .0  | .0  | .0  | .0   | .3    |              |
|              | TOT %      | 7.4  | 5.6  | .9  | .1 | .1 | .2 | .1  | .8  | .0  | .4   | 15.6  |              |
| 10+          | 0-3        | 2.0  | .9   | .2  | .1 | .2 | .2 | .4  | .7  | .0  | 1.7  | 6.3   |              |
|              | 4-10       | 21.3 | 12.9 | 1.9 | .5 | .4 | .4 | .8  | 4.0 | .0  | .0   | 42.2  |              |
|              | 11-21      | 17.8 | 12.1 | 1.1 | .1 | .1 | .1 | .1  | .8  | .0  | .0   | 32.1  |              |
|              | 22+        | .6   | .7   | *   | .0 | .0 | .0 | .0  | *   | .0  | .0   | 1.4   |              |
|              | TOT %      | 41.7 | 26.6 | 3.2 | .7 | .7 | .7 | 1.2 | 5.6 | .0  | 1.7  | 82.0  |              |
| TOT OBS      |            | 8749 |      |     |    |    |    |     |     |     |      |       |              |
| TOT PCT      |            | 50.0 | 33.1 | 4.3 | .9 | .8 | .9 | 1.4 | 6.4 | .0  | 2.2  | 100.0 |              |

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PERIOD: (PRIMARY) 1921-1973  
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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NM >4/8) AND  
OCCURRENCE OF NM <5/8 BY HOUR

| HOUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NM <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|--------------------|--------------|
| 00003         | .2         | .0         | .2         | 1.2        | 3.6          | 3.8          | 1.5          | .8           | .6           | 3.0   | 14.9  | 85.1               | 1320         |
| 06009         | .1         | .0         | .1         | .9         | 3.7          | 3.1          | 1.5          | .7           | .9           | 2.6   | 13.6  | 86.4               | 1362         |
| 12015         | .0         | .1         | .1         | .8         | 2.5          | 3.5          | 1.9          | 1.1          | .6           | 3.6   | 14.3  | 85.7               | 1492         |
| 18021         | .1         | .0         | .4         | .4         | 2.3          | 4.3          | 1.9          | 1.0          | 1.1          | 4.4   | 15.8  | 84.2               | 1320         |
| TOT           | 6          | 2          | 11         | 45         | 166          | 201          | 94           | 49           | 44           | 187   | 805   | 4689               | 5494         |
| PCT           | .1         | *          | .2         | .8         | 3.0          | 3.7          | 1.7          | .9           | .8           | 3.4   | 14.7  | 85.3               | 100.0        |

TABLE 11

PERCENT FREQUENCY VS BY (NM) BY HOUR

| HOUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | .0   | .2    | .2  | 1.9 | 15.3 | 82.4 | 2013         |
| 06009         | .1   | .4    | .2  | 1.6 | 17.4 | 80.3 | 2470         |
| 12015         | *    | .2    | .1  | 1.6 | 13.1 | 84.9 | 2120         |
| 18021         | *    | .7    | .5  | 1.6 | 16.7 | 80.5 | 2371         |
| TOT           | 4    | 38    | 21  | 149 | 1412 | 7350 | 8974         |
| PCT           | *    | .4    | .2  | 1.7 | 15.7 | 81.9 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NM) AND/OR  
CEILING HGT (FEET, NM >4/8) BY HOUR

| HOUR<br>(GMT) | <150<br><500 | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NM <5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|--------------|------------|-------------|-----------------|-------------------|--------------|
| 00003         | .2           | .4         | 3.3         | 13.4            | 83.3              | 1279         |
| 06009         | .2           | .5         | 2.9         | 12.6            | 84.5              | 1318         |
| 12015         | .0           | .3         | 2.5         | 13.5            | 84.0              | 1455         |
| 18021         | .1           | .5         | 2.7         | 15.0            | 82.3              | 1288         |
| TOT           | 6            | 21         | 152         | 727             | 4461              | 5340         |
| PCT           | .1           | .4         | 2.8         | 13.6            | 83.5              | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94  | .0   | .0    | *     | *     | .1    | .0    | .0    | .0     | 6            | .1          |
| 85/89  | .0   | .0    | *     | .5    | 1.0   | 1.1   | .2    | *      | 154          | 2.8         |
| 80/84  | .0   | *     | .4    | 2.3   | 8.5   | 16.3  | 8.9   | 2.0    | 2099         | 38.5        |
| 75/79  | .0   | .0    | .2    | 1.4   | 6.4   | 20.0  | 16.9  | 4.0    | 2664         | 48.8        |
| 70/74  | .0   | .0    | *     | .2    | 1.0   | 3.6   | 3.5   | 1.2    | 519          | 9.5         |
| 65/69  | .0   | .0    | .0    | .0    | .0    | .1    | .1    | *      | 12           | .2          |
| 60/64  | .0   | .0    | .0    | .0    | .0    | .0    | *     | .0     | 1            | *           |
| TOTAL  | 0    | 1     | 36    | 238   | 924   | 2240  | 1617  | 399    | 5455         | 100.0       |
| PCT    | .0   | *     | .7    | 4.4   | 16.9  | 41.1  | 29.6  | 7.3    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W   | NW  | VAR | CALM |
|------|------|-----|----|----|----|-----|-----|-----|------|
| .1   | *    | *   | .0 | .0 | .0 | .0  | *   | .0  | .0   |
| 1.4  | .9   | .1  | .1 | *  | .1 | *   | .2  | .0  | *    |
| 19.9 | 10.3 | 1.8 | .3 | .4 | .4 | .9  | 3.6 | .0  | 1.0  |
| 27.2 | 14.9 | 1.9 | .2 | .2 | .1 | .3  | 3.1 | .0  | .9   |
| 5.9  | 2.9  | .2  | *  | *  | *  | .1  | .3  | .0  | .1   |
| .1   | .1   | .0  | .0 | .0 | .0 | .0  | *   | .0  | .0   |
| .0   | *    | .0  | .0 | .0 | .0 | .0  | .0  | .0  | .0   |
| 54.5 | 29.2 | 4.0 | .6 | .6 | .6 | 1.3 | 7.2 | .0  | 2.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 87  | 83  | 82  | 78  | 73 | 70 | 64  | 77.8 | 2567         |
| 06009         | 91  | 84  | 82  | 78  | 72 | 69 | 65  | 77.4 | 3592         |
| 12015         | 93  | 88  | 85  | 80  | 74 | 72 | 68  | 80.1 | 2639         |
| 18021         | 92  | 87  | 84  | 79  | 73 | 71 | 68  | 79.1 | 3458         |
| TOT           | 93  | 86  | 84  | 79  | 73 | 70 | 64  | 78.5 | 12256        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 1.5   | 8.1   | 38.8  | 41.7  | 10.0   | 80   | 1356         |
| 06009         | .0   | 3.4   | 12.0  | 36.1  | 37.4  | 11.1   | 79   | 1436         |
| 12015         | .0   | 10.3  | 26.7  | 43.2  | 16.2  | 3.6    | 72   | 1485         |
| 18021         | .0   | 4.2   | 20.1  | 45.2  | 25.0  | 5.4    | 75   | 1366         |
| TOT           | 0    | 279   | 955   | 2303  | 1684  | 422    | 76   | 5643         |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | W<br>FOG | WD<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|-----------|
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | *        | .0       | 2     | .0       | *         |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | *        | .1       | 7     | *        | .1        |
| 9/10               | .0       | .0       | .0       | .0       | .1       | .1       | .1       | .1       | 20    | *        | .3        |
| 7/8                | .0       | .0       | .0       | .1       | .1       | .3       | .2       | *        | 42    | *        | .7        |
| 6                  | .0       | .0       | .0       | *        | .2       | .4       | .2       | .1       | 50    | .0       | .9        |
| 5                  | .0       | .0       | .0       | .1       | .4       | .6       | .3       | *        | 85    | *        | 1.4       |
| 4                  | .0       | .0       | .1       | .2       | 1.0      | 1.0      | .6       | .0       | 165   | *        | 2.8       |
| 3                  | .0       | .0       | .1       | .5       | 1.4      | 1.9      | .4       | *        | 247   | *        | 4.2       |
| 2                  | .0       | .0       | .2       | .9       | 3.3      | 2.9      | .3       | .0       | 452   | .1       | 7.6       |
| 1                  | .0       | .0       | .3       | 2.1      | 5.9      | 4.6      | .3       | .0       | 766   | .2       | 12.9      |
| 0                  | .0       | .0       | .5       | 2.8      | 8.0      | 5.1      | .2       | .0       | 969   | .3       | 16.3      |
| -1                 | .0       | .0       | .4       | 3.8      | 9.4      | 4.5      | *        | .0       | 1060  | .2       | 18.0      |
| -2                 | .0       | *        | .5       | 3.2      | 7.5      | 2.6      | *        | .0       | 800   | .2       | 13.5      |
| -3                 | *        | .0       | .4       | 3.4      | 5.0      | 1.0      | .0       | .0       | 570   | .1       | 9.7       |
| -4                 | .0       | *        | .3       | 1.9      | 2.6      | .5       | .0       | .0       | 309   | .1       | 5.2       |
| -5                 | .0       | *        | .2       | 1.1      | 1.0      | .2       | .0       | .0       | 150   | *        | 2.5       |
| -6                 | .0       | .0       | .1       | .4       | .4       | .1       | .0       | .0       | 62    | .0       | 1.1       |
| -7/-8              | .0       | .0       | .1       | .4       | .2       | .1       | .0       | .0       | 51    | .0       | .9        |
| -9/-10             | .0       | .1       | .1       | .2       | .1       | .0       | .0       | .0       | 19    | .0       | .3        |
| -11/-13            | .0       | .0       | *        | *        | .0       | .0       | .0       | .0       | 4     | .0       | .1        |
| -14/-16            | .0       | *        | .0       | .0       | .0       | .0       | .0       | .0       | 1     | .0       | *         |
| TOTAL              | 1        | 8        | 194      | 2712     | 1514     | 170      | 14       | 5831     | 75    | 5756     |           |
| PCT                | *        | .1       | 3.3      | 20.9     | 46.5     | 26.0     | 2.9      | .2       | 100.0 | 1.3      | 98.7      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | 1.3 | 3.5  | .1    | .0    | .0    | .0  | 4.9  | .3  | 1.2  | *     | .0    | .0    | .0  | 1.6  |
| 1-2     | .7  | 16.4 | 5.1   | .0    | .0    | .0  | 22.2 | .2  | 5.7  | 2.6   | .0    | .0    | .0  | 8.5  |
| 3-4     | .1  | 6.7  | 12.5  | .2    | .0    | .0  | 19.5 | .0  | 3.4  | 6.2   | .1    | .0    | .0  | 9.7  |
| 5-6     | *   | 1.3  | 6.7   | .1    | .0    | .0  | 8.1  | *   | .4   | 3.6   | .2    | .0    | .0  | 4.3  |
| 7       | .0  | .0   | 2.0   | .3    | .0    | .0  | 2.3  | .0  | .1   | 1.4   | .2    | .0    | .0  | 1.7  |
| 8-9     | .0  | *    | .4    | .2    | .0    | .0  | .6   | .0  | .0   | .3    | .2    | .0    | .0  | .5   |
| 10-11   | .0  | *    | .1    | *     | .0    | .0  | .1   | .0  | .0   | .0    | *     | .0    | .0  | *    |
| 12      | .0  | *    | *     | .0    | .0    | .0  | .1   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 2.1 | 27.9 | 27.0  | .8    | .0    | .0  | 57.8 | .6  | 10.9 | 14.1  | .7    | .0    | .0  | 26.3 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .3   | .0    | .0    | .0    | .0  | .4  | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .1  | .9   | .1    | .0    | .0    | .0  | 1.0 | .1  | .1   | *     | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .4   | .5    | *     | .0    | .0  | 1.0 | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 5-6     | *   | .1   | .2    | .0    | .0    | .0  | .3  | .0  | .0   | *     | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | *     | .0    | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 1.6  | 1.0   | .1    | .0    | .0  | 2.9 | .1  | .2   | .1    | .0    | .0    | .0  | .3  |

PERIOD: (OVER-ALL) 1963-1973

NOVEMBER

AREA 0008 DAKAR  
14.8N 18.0W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | S   |      |       |       |       |     |     | SW  |      |       |       |       |     |     |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
| <1      | .1  | .2   | .0    | .0    | .0    | .0  | .3  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 1-2     | .0  | .1   | .0    | .0    | .0    | .0  | .2  | .0  | .1   | .0    | .0    | .0    | .0  | .2  |
| 3-4     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .1  | .3   | .1    | .0    | .0    | .0  | .5  | .0  | .2   | .0    | .0    | .0    | .0  | .3  |

| HGT     | W   |      |       |       |       |     |     | NW  |      |       |       |       |     |     | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|-----------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |           |
| <1      | .3  | .3   | .0    | .0    | .0    | .0  | .5  | .4  | .9   | .0    | .0    | .0    | .0  | 1.3 |           |
| 1-2     | .1  | .7   | .0    | .0    | .0    | .0  | .8  | .3  | 3.5  | .5    | .0    | .0    | .0  | 4.3 |           |
| 3-4     | .0  | .1   | .1    | .0    | .0    | .0  | .1  | .0  | 1.3  | .6    | .0    | .0    | .0  | 1.9 |           |
| 5-6     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .1   | .2    | .0    | .0    | .0  | .3  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .4  | 1.0  | .1    | .0    | .0    | .0  | 1.5 | .7  | 5.8  | 1.4   | .0    | .0    | .0  | 7.9 | 97.5      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.2 | 6.5  | .1    | .0    | .0    | .0  | 12.8  |         |
| 1-2     | 1.8 | 27.2 | 8.3   | .0    | .0    | .0  | 37.3  |         |
| 3-4     | .1  | 11.6 | 19.6  | .3    | .0    | .0  | 31.6  |         |
| 5-6     | .1  | 1.9  | 10.6  | .3    | .0    | .0  | 12.8  |         |
| 7       | .0  | .1   | 3.5   | .5    | .0    | .0  | 4.1   |         |
| 8-9     | .0  | .0   | .7    | .4    | .0    | .0  | 1.2   |         |
| 10-11   | .0  | .0   | .1    | .1    | .0    | .0  | .2    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.1 | 47.4 | 42.9  | 1.5   | .0    | .0  | 100.0 | 3249    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 2.2 | 14.5 | 14.2 | 6.3  | 2.4  | .6  | .2    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1650  | 3        |
| 6-7          | .0  | 1.8  | 7.7  | 8.4  | 4.0  | 1.5 | .9    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 993   | 5        |
| 8-9          | .0  | .4   | 2.0  | 3.6  | 2.5  | 1.2 | .5    | .0 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 420   | 6        |
| 10-11        | .0  | .3   | .7   | .7   | .7   | .6  | .2    | .2 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 146   | 6        |
| 12-13        | .0  | .0   | 1.0  | .2   | .1   | .1  | .0    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 87    | 5        |
| >13          | .0  | .0   | .0   | .5   | .2   | .0  | .3    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 44    | 7        |
| INDET        | 4.5 | 5.2  | 4.4  | 2.6  | 1.0  | .3  | .2    | .2 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 753   | 3        |
| TOTAL        | 275 | 910  | 1221 | 911  | 448  | 178 | 90    | 29 | 9     | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4073  | 4        |
| PCT          | 6.8 | 22.3 | 30.0 | 22.4 | 11.0 | 4.4 | 2.2   | .7 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

# DECEMBER

AREA 0008 DAKAR  
14.8N 17.9W

TABLE 1

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|          | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| N        | .1                 | *         | *    | .0        | .0   | .0              | .0   | .1                      | .1             | .2        | 1.9         | .0                  | 3.2        | 1.5             | 93.0       |
| NE       | .2                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | .2        | 1.7         | .0                  | 4.3        | 1.7             | 91.6       |
| E        | .9                 | .0        | .2   | .0        | .0   | .0              | .0   | 1.0                     | .1             | .3        | 1.7         | .0                  | 12.1       | 4.6             | 80.0       |
| SE       | 6.4                | .0        | .0   | .0        | .0   | .0              | .0   | 6.4                     | .0             | .0        | .0          | .0                  | 9.6        | 6.4             | 77.6       |
| S        | 3.6                | .0        | .0   | .0        | .0   | .0              | .0   | 3.6                     | .0             | .0        | 5.5         | .0                  | 1.8        | .0              | 89.1       |
| SW       | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 19.7        | .0                  | 7.0        | .0              | 73.2       |
| W        | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 1.1         | .0                  | 13.2       | .0              | 85.6       |
| NW       | .6                 | .0        | .2   | .0        | .0   | .0              | .0   | .8                      | .6             | .4        | 2.2         | .0                  | 4.8        | .1              | 91.1       |
| VAR      | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM     | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | 1.6         | .0                  | 4.8        | 4.8             | 88.7       |
| TOT PCT  | .2                 | *         | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | .2        | 1.9         | .0                  | 4.4        | 1.8             | 91.3       |
| TOT OBS: | 7095               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

## PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT) | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|            | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FOG WD PCPN | FOG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG WEA |
| 00003      | .1                 | .0        | .2   | .0        | .0   | .0              | .0   | .2                      | .1             | .4        | 1.6         | .0                  | 3.7        | 1.3             | 92.7       |
| 06009      | .5                 | .1        | .1   | .0        | .0   | .0              | .0   | .6                      | .2             | .4        | 2.2         | .0                  | 4.1        | 1.6             | 90.8       |
| 12015      | .1                 | .1        | .0   | .0        | .0   | .0              | .0   | .2                      | .1             | .0        | 1.6         | .0                  | 4.5        | 2.2             | 91.4       |
| 18021      | .2                 | .1        | .0   | .0        | .0   | .0              | .0   | .3                      | .0             | .1        | 2.3         | .0                  | 5.5        | 1.8             | 89.9       |
| TOT PCT    | .2                 | .1        | .1   | .0        | .0   | .0              | .0   | .3                      | .1             | .2        | 2.0         | .0                  | 4.5        | 1.7             | 91.2       |
| TOT OBS:   | 7234               |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

## PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |       | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |       |
|----------|--------------------|------|-------|-------|-------|-----|-------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|-------|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00    |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21    |
| N        | 1.3                | 17.2 | 19.2  | 1.2   | *     | .0  |       | 38.9      | 11.4     | 46.9     | 55.2       | 39.6  | 25.9  | 30.1  | 50.0  | 42.5  | 39.9  |
| NE       | 1.1                | 17.0 | 25.1  | 3.1   | .1    | .0  |       | 46.3      | 12.7     | 40.3     | 32.1       | 46.6  | 56.3  | 53.5  | 41.4  | 43.0  | 43.5  |
| E        | .5                 | 3.8  | 3.8   | .7    | *     | .0  |       | 8.9       | 11.8     | 5.6      | 3.8        | 7.9   | 13.6  | 12.7  | 4.6   | 7.7   | 9.0   |
| SE       | .1                 | .4   | .1    | *     | .0    | .0  |       | .7        | 7.2      | .5       | .0         | .6    | .8    | .9    | .3    | .8    | .8    |
| S        | .1                 | .1   | .1    | .0    | .0    | .0  |       | .3        | 7.6      | .4       | .0         | .3    | .4    | .3    | .0    | .4    | .3    |
| SW       | .1                 | .1   | *     | .0    | .0    | .0  |       | .3        | 4.7      | .3       | 1.2        | .3    | .1    | .2    | .0    | .4    | .5    |
| W        | .2                 | .4   | *     | .0    | .0    | .0  |       | .6        | 5.8      | .8       | .4         | .4    | .6    | .2    | .6    | .7    | .7    |
| NW       | .4                 | 2.0  | .5    | *     | .0    | .0  |       | 2.9       | 7.6      | 3.8      | 5.1        | 3.0   | 1.5   | 1.3   | 1.9   | 3.5   | 3.8   |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  |       | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    | .0    |
| CALM     | 1.1                |      |       |       |       |     |       | 1.1       | .0       | 1.5      | 2.3        | 1.3   | .8    | .7    | 1.2   | .9    | 1.3   |
| TOT OBS  | 628                | 5166 | 6145  | 633   | 12    | 0   | 12584 |           | 11.7     | 2525     | 173        | 2479  | 1136  | 2510  | 162   | 2447  | 1152  |
| TOT PCT  | 5.0                | 41.1 | 48.8  | 5.0   | .1    | .0  |       | 100.0     |          | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 12    | 18 |
| N        | 6.0                | 26.5 | 5.9   | .1    | .0  |           | 38.9     | 11.4     | 47.4       | 35.3  | 31.3  | 41.7  |    |
| NE       | 5.5                | 29.1 | 11.1  | .5    | *   |           | 46.3     | 12.7     | 39.7       | 49.7  | 52.8  | 43.2  |    |
| E        | 2.0                | 4.7  | 2.0   | .1    | .0  |           | 8.9      | 11.8     | 5.5        | 9.7   | 12.2  | 8.1   |    |
| SE       | .4                 | .3   | *     | .0    | .0  |           | .7       | 7.2      | .4         | .6    | .9    | .8    |    |
| S        | .2                 | .1   | *     | .0    | .0  |           | .3       | 7.6      | .3         | .3    | .3    | .4    |    |
| SW       | .3                 | *    | .0    | .0    | .0  |           | .3       | 4.7      | .4         | .2    | .2    | .4    |    |
| W        | .4                 | .2   | *     | .0    | .0  |           | .6       | 5.8      | .8         | .5    | .3    | .7    |    |
| NW       | 1.3                | 1.5  | .1    | *     | .0  |           | 2.9      | 7.6      | 3.9        | 2.6   | 1.4   | 3.6   |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 1.1                |      |       |       |     |           | 1.1      | .0       | 1.6        | 1.1   | .7    | 1.1   |    |
| TOT OBS  | 2164               | 7907 | 2408  | 103   | 2   | 12584     |          | 11.7     | 2698       | 3615  | 2672  | 3599  |    |
| TOT PCT  | 17.2               | 62.8 | 19.1  | .8    | *   |           | 100.0    |          | 100.0      | 100.0 | 100.0 | 100.0 |    |



PERIOD: (PRIMARY) 1923-1973  
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14.8N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| HOUR  | CALM | 1-3 | 4-10 | WIND SPEED (KNOTS) |       |       | 4P+ | MEAN  | PCT FREQ | TOTAL OBS |
|-------|------|-----|------|--------------------|-------|-------|-----|-------|----------|-----------|
|       |      |     |      | 11-21              | 22-33 | 34-47 |     |       |          |           |
| 0000Z | 1.6  | 4.0 | 44.9 | 45.0               | 4.4   | .1    | .0  | 11.2  | 100.0    | 2698      |
| 0600Z | 1.1  | 3.4 | 40.5 | 49.7               | 5.2   | .1    | .0  | 11.9  | 100.0    | 3615      |
| 1200Z | .7   | 2.6 | 34.7 | 54.8               | 7.0   | .2    | .0  | 12.8  | 100.0    | 2672      |
| 1800Z | 1.1  | 5.2 | 43.5 | 46.4               | 3.9   | *     | .0  | 11.2  | 100.0    | 3599      |
| TOT   | 142  | 486 | 2166 | 6145               | 639   | 12    | 0   | 11.7  |          | 12384     |
| PCT   | 1.1  | 3.9 | 41.1 | 48.8               | 5.0   | .1    | .0  | 100.0 |          |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBSCD | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|--------------|--------------|------------------------|
|          |      |      |      |              |              |                        |
| N        | 27.8 | 7.0  | 8.9  | 3.4          | 2.4          |                        |
| NE       | 22.5 | 6.2  | 8.6  | 3.8          | 2.8          |                        |
| E        | 3.7  | .6   | 1.1  | .8           | 2.6          |                        |
| SE       | .2   | *    | .1   | *            | 3.4          |                        |
| S        | .2   | *    | .0   | .1           | 2.4          |                        |
| SW       | .1   | *    | *    | *            | 2.8          |                        |
| W        | .2   | .2   | .1   | *            | 3.2          |                        |
| NW       | 2.0  | .6   | .6   | .2           | 2.5          |                        |
| VAR      | .0   | .0   | .0   | .0           | .0           |                        |
| CALM     | .6   | .1   | .2   | .1           | 2.4          |                        |
| TOT OBS  | 3155 | 811  | 1079 | 466          | 5511         | 2.6                    |
| TOT PCT  | 57.2 | 14.7 | 19.6 | 8.5          | 100.0        |                        |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

| 000 | 150 | 300 | 600 | 1000 | 2000 | 3500 | 5000 | 6500 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|-----|-----|-----|-----|------|------|------|------|------|-------|--------------------|--------------|
| 149 | 299 | 599 | 999 | 1999 | 3499 | 4999 | 6499 | 7999 |       |                    |              |
| .1  | .0  | *   | .3  | 1.1  | .9   | .6   | .3   | .6   | 1.6   | 41.5               |              |
| *   | .0  | *   | .4  | .8   | 1.1  | .8   | .5   | .3   | 1.6   | 35.5               |              |
| .0  | *   | *   | .1  | .2   | .2   | .1   | .1   | *    | .1    | 5.3                |              |
| .0  | .0  | .0  | .0  | .0   | *    | *    | .0   | *    | *     | .3                 |              |
| .0  | .0  | *   | .0  | *    | .0   | .0   | .0   | .0   | .0    | .2                 |              |
| .0  | .0  | .0  | .0  | *    | .0   | *    | .0   | *    | .0    | .2                 |              |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | *    | *    | .0    | .5                 |              |
| .0  | .0  | *   | *   | .1   | *    | .1   | *    | *    | .1    | 3.1                |              |
| .0  | .0  | .0  | .0  | .0   | .0   | .0   | .0   | .0   | .0    | .0                 |              |
| .0  | .0  | .0  | .0  | *    | *    | .0   | *    | *    | .1    | .8                 |              |
| 10  | 1   | 6   | 43  | 121  | 128  | 92   | 56   | 54   | 187   | 4813               | 5511         |
| .2  | *   | .1  | .8  | 2.2  | 2.3  | 1.7  | 1.0  | 1.0  | 3.4   | 87.3               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | VSBY (NM)   |            |            |            |              |              |               |            |
|-------------------|-------------|------------|------------|------------|--------------|--------------|---------------|------------|
|                   | * OR<br>>10 | * OR<br>>5 | * OR<br>>2 | * OR<br>>1 | * OR<br>>1/2 | * OR<br>>1/4 | * OR<br>>50YD | * OR<br>>0 |
| * OR >6500        | 3.7         | 4.3        | 4.4        | 4.4        | 4.4          | 4.4          | 4.4           | 4.4        |
| * OR >5000        | 4.6         | 5.3        | 5.4        | 5.4        | 5.4          | 5.4          | 5.4           | 5.4        |
| * OR >3500        | 6.0         | 6.9        | 7.1        | 7.1        | 7.1          | 7.1          | 7.1           | 7.1        |
| * OR >2000        | 8.2         | 9.3        | 9.4        | 9.5        | 9.5          | 9.5          | 9.5           | 9.5        |
| * OR >1000        | 10.1        | 11.5       | 11.7       | 11.7       | 11.7         | 11.7         | 11.7          | 11.8       |
| * OR >600         | 10.7        | 12.2       | 12.5       | 12.5       | 12.5         | 12.5         | 12.5          | 12.5       |
| * OR >300         | 10.7        | 12.3       | 12.6       | 12.6       | 12.6         | 12.6         | 12.6          | 12.6       |
| * OR >150         | 10.7        | 12.3       | 12.6       | 12.6       | 12.6         | 12.6         | 12.6          | 12.6       |
| * OR >0           | 10.8        | 12.4       | 12.8       | 12.8       | 12.8         | 12.8         | 12.8          | 12.8       |
| TOTAL             | 603         | 693        | 714        | 717        | 717          | 717          | 717           | 718        |

TOTAL NUMBER OF OBS: 5592

PCT FREQ NH <5/8: 87.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

| 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|------|------|-----|-----|-----|-----|-----|-----|-----|-------|--------------|
| 58.0 | 10.9 | 7.1 | 5.7 | 4.7 | 2.7 | 3.2 | 3.0 | 4.6 | .2    | 5794         |

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PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

AREA 0008 DAKAR  
14.8N 17.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N    | NE   | E    | SE   | S    | SW   | W    | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|------|------|------|------|------|------|------|------|-----|------|-------|--------------|
| <1/2         | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    | *            |
|              | NO PCP | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
|              | TOT %  | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    |              |
| 1/2<1        | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    | 1.2          |
|              | NO PCP | .5   | .5   | * .0 | .0   | .0   | .0   | * .1 | .0   | .0  | .0   | .0    |              |
|              | TOT %  | .5   | .5   | * .0 | .0   | .0   | .0   | * .1 | .0   | .0  | .0   | .0    |              |
| 1<2          | PCP    | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    | 1.4          |
|              | NO PCP | .4   | .5   | .3   | * .0 | * .0 | * .0 | * .0 | * .0 | .0  | .0   | .0    |              |
|              | TOT %  | .4   | .5   | .3   | * .0 | * .0 | * .0 | * .0 | * .0 | .0  | .0   | .0    |              |
| 2<5          | PCP    | .0   | * .0 | .0   | .0   | .0   | .0   | .0   | .0   | .0  | .0   | .0    | 2.2          |
|              | NO PCP | .7   | 1.0  | .4   | * .0 | * .0 | * .0 | * .0 | * .0 | .0  | .0   | .0    |              |
|              | TOT %  | .7   | 1.0  | .4   | * .0 | * .0 | * .0 | * .0 | * .0 | .0  | .0   | .0    |              |
| 5<10         | PCP    | * .1 | .1   | * .0 | * .0 | .0   | .0   | * .0 | .0   | .0  | .0   | .2    | 19.4         |
|              | NO PCP | 7.9  | 8.1  | 1.8  | .1   | .2   | .1   | .2   | .8   | .0  | .3   | .0    |              |
|              | TOT %  | 7.9  | 8.2  | 1.9  | .2   | .2   | .1   | .2   | .8   | .0  | .3   | .0    |              |
| 10+          | PCP    | * .0 | * .0 | * .0 | .0   | .0   | .0   | .0   | * .0 | .0  | .0   | .1    | 75.5         |
|              | NO PCP | 36.9 | 30.6 | 3.9  | .2   | .2   | .2   | .4   | 2.6  | .0  | .5   | .0    |              |
|              | TOT %  | 37.0 | 30.7 | 3.9  | .2   | .2   | .2   | .4   | 2.6  | .0  | .5   | .0    |              |
| TOT OBS      |        | 7091 |      |      |      |      |      |      |      |     |      |       |              |
| TOT PCT      |        | 46.5 | 40.9 | 6.5  | .4   | .4   | .3   | .6   | 3.5  | .0  | .9   | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N    | NE   | E    | SE | S  | SW | W  | NW  | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|------|------|------|----|----|----|----|-----|-----|------|-------|--------------|
| <1/2         | 0-3        | *    | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 4-10       | *    | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 11-21      | *    | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | *     |              |
|              | 22+        | .0   | .0   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .0    |              |
|              | TOT %      | *    | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
| 1/2<1        | 0-3        | *    | *    | .0   | .0 | .0 | .0 | .0 | .0  | .0  | *    | *     |              |
|              | 4-10       | .2   | .1   | .0   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3    |              |
|              | 11-21      | .2   | .2   | *    | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .4    |              |
|              | 22+        | *    | .1   | * .0 | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .4   | .4   | *    | .0 | .0 | .0 | *  | .1  | .0  | *    | .9    |              |
| 1<2          | 0-3        | .1   | *    | *    | *  | *  | *  | *  | *   | .0  | .0   | .2    |              |
|              | 4-10       | .1   | .2   | .1   | *  | *  | *  | *  | *   | .0  | .0   | .4    |              |
|              | 11-21      | .2   | .3   | .2   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .7    |              |
|              | 22+        | .0   | .1   | * .0 | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .1    |              |
|              | TOT %      | .3   | .6   | .3   | *  | *  | *  | *  | *   | .0  | .0   | 1.4   |              |
| 2<5          | 0-3        | .1   | .1   | *    | .0 | .0 | *  | .0 | .0  | .0  | *    | .2    |              |
|              | 4-10       | .2   | .3   | .2   | *  | .0 | *  | *  | *   | .0  | .0   | .8    |              |
|              | 11-21      | .3   | .7   | .2   | *  | .0 | .0 | .0 | .0  | .0  | .0   | 1.3   |              |
|              | 22+        | *    | .2   | .1   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | .3    |              |
|              | TOT %      | .6   | 1.3  | .5   | *  | .0 | *  | *  | *   | *   | .0   | 2.6   |              |
| 5<10         | 0-3        | .4   | .4   | .1   | *  | *  | *  | .1 | .1  | .0  | .4   | 1.6   |              |
|              | 4-10       | 3.6  | 3.6  | .7   | .1 | .1 | *  | .1 | .5  | .0  | .0   | 8.7   |              |
|              | 11-21      | 3.1  | 4.4  | 1.0  | *  | *  | *  | .1 | .0  | .0  | .0   | 8.7   |              |
|              | 22+        | .2   | .5   | .2   | *  | .0 | .0 | .0 | .0  | .0  | .0   | .9    |              |
|              | TOT %      | 7.3  | 8.9  | 2.1  | .1 | .2 | *  | .1 | .7  | .0  | .4   | 19.9  |              |
| 10+          | 0-3        | .9   | .7   | .2   | .1 | *  | .1 | .1 | .2  | .0  | .6   | 2.9   |              |
|              | 4-10       | 14.5 | 11.6 | 1.8  | .2 | .1 | .1 | .3 | 1.7 | .0  | .0   | 30.2  |              |
|              | 11-21      | 17.4 | 18.7 | 2.0  | .1 | .1 | *  | *  | .4  | .0  | .0   | 38.7  |              |
|              | 22+        | 1.0  | 2.0  | .4   | .0 | .0 | .0 | .0 | .0  | .0  | .0   | 3.4   |              |
|              | TOT %      | 33.7 | 33.0 | 4.4  | .3 | .2 | .2 | .4 | 2.4 | .0  | .6   | 75.2  |              |
| TOT OBS      |            | 9469 |      |      |    |    |    |    |     |     |      |       |              |
| TOT PCT      |            | 42.4 | 44.2 | 7.3  | .5 | .3 | .3 | .6 | 3.2 | .0  | 1.1  | 100.0 |              |

PERIOD: (PRIMARY) 1923-1973  
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AREA 0008 DAKAR  
14.8N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HRUR<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS |
|---------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|--------------|
| 00003         | .2         | .0         | .0         | .8         | 1.7          | 2.1          | 1.5          | .8           | 1.0          | 3.3   | 11.5  | 88.5                | 1436         |
| 06009         | .1         | .0         | .1         | .4         | 2.8          | 2.4          | 1.2          | .9           | .7           | 3.6   | 12.3  | 87.7                | 1409         |
| 12015         | .1         | .1         | .1         | .8         | 2.1          | 1.9          | 1.3          | 1.3          | .7           | 2.9   | 11.4  | 88.6                | 1494         |
| 18021         | .3         | .0         | .2         | .9         | 2.3          | 2.8          | 2.5          | 1.1          | 1.4          | 3.7   | 15.3  | 84.7                | 1386         |
| TOT           | 11         | 1          | 6          | 43         | 128          | 132          | 94           | 57           | 55           | 193   | 720   | 5005                | 5725         |
| PCT           | .2         | *          | .1         | .8         | 2.2          | 2.3          | 1.6          | 1.0          | 1.0          | 3.4   | 12.6  | 87.4                | 100.0        |

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

| HRUR<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS |
|---------------|------|-------|-----|-----|------|------|--------------|
| 00003         | *    | .6    | .9  | 2.6 | 19.2 | 76.6 | 2223         |
| 06009         | *    | 1.1   | 1.3 | 2.1 | 21.3 | 74.1 | 2621         |
| 12015         | .1   | 1.1   | 1.3 | 2.5 | 16.6 | 78.3 | 2180         |
| 18021         | .1   | .9    | 1.7 | 3.2 | 22.3 | 71.8 | 2585         |
| TOT           | 8    | 91    | 129 | 251 | 1922 | 7208 | 9609         |
| PCT           | .1   | .9    | 1.3 | 2.6 | 20.0 | 75.0 | 100.0        |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HRUR<br>(GMT) | <150<br><500D | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS |
|---------------|---------------|------------|-------------|-----------------|--------------------|--------------|
| 00003         | .2            | .2         | 3.2         | 10.6            | 86.2               | 1398         |
| 06009         | .1            | .2         | 2.8         | 11.7            | 85.6               | 1378         |
| 12015         | .2            | .4         | 3.8         | 10.1            | 86.0               | 1459         |
| 18021         | .4            | .7         | 4.2         | 13.6            | 82.2               | 1357         |
| TOT           | 13            | 21         | 196         | 642             | 4754               | 5592         |
| PCT           | .2            | .4         | 3.5         | 11.5            | 85.0               | 100.0        |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 85/89  | .0   | .0    | *     | .1    | .1    | .1    | *     | .0     | 22           | .4          |
| 80/84  | .0   | .0    | .2    | 1.0   | 2.2   | 2.6   | 1.0   | .2     | 440          | 7.2         |
| 75/79  | .0   | *     | 1.0   | 4.6   | 8.7   | 13.9  | 7.7   | 2.0    | 2310         | 38.0        |
| 70/74  | .0   | .1    | 1.3   | 4.5   | 10.7  | 15.1  | 9.2   | 3.0    | 2659         | 43.8        |
| 65/69  | .0   | *     | .2    | 1.2   | 2.0   | 4.3   | 2.1   | .5     | 627          | 10.3        |
| 60/64  | .0   | .0    | .0    | .0    | .1    | .1    | *     | .0     | 15           | .2          |
| TOTAL  | .0   | 8     | 168   | 694   | 1451  | 2187  | 1224  | 341    | 6073         | 100.0       |
| PCT    | .0   | .1    | 2.8   | 11.4  | 23.9  | 36.0  | 20.2  | 5.6    |              |             |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

| N    | NE   | E   | SE | S  | SW | W  | NW  | VAR | CALM |
|------|------|-----|----|----|----|----|-----|-----|------|
| .2   | .1   | *   | .0 | .0 | *  | *  | *   | .0  | .0   |
| 3.7  | 2.5  | .4  | .0 | .1 | *  | *  | .5  | .0  | .1   |
| 17.8 | 14.7 | 2.3 | .2 | .1 | .1 | .4 | 1.9 | .0  | .5   |
| 19.9 | 19.3 | 2.7 | .2 | .1 | .1 | .2 | 1.2 | .0  | .1   |
| 4.9  | 4.5  | .8  | *  | .0 | .0 | .0 | .1  | .0  | .0   |
| .1   | .1   | *   | .0 | .0 | .0 | .0 | .0  | .0  | .0   |
| 46.6 | 41.1 | 6.2 | .4 | .3 | .3 | .6 | 3.7 | .0  | .8   |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HRUR<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|---------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003         | 89  | 81  | 79  | 73  | 68 | 65 | 60  | 73.4 | 2735         |
| 06009         | 86  | 80  | 78  | 73  | 68 | 65 | 61  | 73.0 | 3653         |
| 12015         | 89  | 84  | 82  | 75  | 69 | 66 | 59  | 75.3 | 2663         |
| 18021         | 89  | 84  | 81  | 75  | 69 | 66 | 62  | 74.8 | 3591         |
| TOT           | 89  | 83  | 80  | 74  | 68 | 65 | 59  | 74.1 | 12642        |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HRUR<br>(GMT) | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | 4.8   | 17.0  | 40.4  | 29.5  | 8.3   | 76    | 1550   |      |              |
| 06009         | .0   | 13.0  | 19.5  | 35.3  | 24.7  | 7.6   | 74    | 1582   |      |              |
| 12015         | .0   | 25.5  | 29.9  | 30.5  | 10.9  | 3.2   | 68    | 1526   |      |              |
| 18021         | .0   | 13.3  | 28.7  | 37.3  | 16.8  | 3.9   | 71    | 1530   |      |              |
| TOT           | 0    | 873   | 1467  | 2220  | 1271  | 357   | 72    | 6188   |      |              |



PERIOD: (PRIMARY) 1923-1973  
(OVER-ALL) 1855-1973

DECEMBER

AREA 0008 DAKAR  
14.8N 17.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | TOT   | %<br>FOG | %<br>NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|----------------|
| 17/19              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0       | 1     | .0       | *              |
| 14/16              | .0       | .0       | .0       | .0       | .0       | *        | .0       | .0       | .0       | 4     | .0       | .1             |
| 11/13              | .0       | .0       | .0       | .0       | *        | *        | .1       | *        | .0       | 15    | *        | .2             |
| 9/10               | .0       | .0       | .0       | .0       | .2       | .2       | *        | *        | *        | 28    | *        | .4             |
| 7/8                | .0       | .0       | .0       | *        | .2       | .3       | .2       | .1       | .0       | 54    | *        | .8             |
| 6                  | .0       | .0       | .0       | .1       | .2       | .3       | .1       | *        | .0       | 50    | *        | .7             |
| 5                  | .0       | .0       | *        | .2       | .7       | .6       | .3       | *        | .0       | 122   | .1       | 1.8            |
| 4                  | .0       | .0       | *        | .4       | 1.2      | 1.0      | .3       | *        | *        | 199   | .1       | 3.0            |
| 3                  | .0       | .0       | .1       | .6       | 2.1      | 1.5      | .4       | .1       | .0       | 311   | .1       | 4.6            |
| 2                  | .0       | .0       | .1       | 1.5      | 3.6      | 2.2      | .6       | .1       | .0       | 524   | .1       | 7.9            |
| 1                  | .0       | *        | .4       | 2.8      | 6.9      | 3.4      | .6       | .0       | .0       | 920   | .5       | 13.6           |
| 0                  | .0       | .0       | 1.0      | 3.9      | 7.8      | 4.3      | .7       | .0       | .0       | 1153  | .4       | 17.2           |
| -1                 | *        | .0       | 1.0      | 4.3      | 7.4      | 3.4      | .6       | *        | .0       | 1094  | .3       | 16.4           |
| -2                 | .0       | *        | 1.0      | 4.0      | 4.7      | 2.4      | .2       | .0       | .0       | 806   | .2       | 12.2           |
| -3                 | *        | *        | .8       | 3.0      | 3.4      | 1.3      | .1       | *        | .0       | 573   | .1       | 8.7            |
| -4                 | .0       | *        | .5       | 1.7      | 1.8      | .5       | .1       | .0       | .0       | 304   | *        | 4.6            |
| -5                 | .0       | *        | .4       | 1.0      | .9       | .5       | *        | .0       | .0       | 184   | .0       | 2.8            |
| -6                 | .0       | .0       | .2       | .4       | .4       | .1       | .0       | .0       | .0       | 75    | *        | 1.1            |
| -7/-8              | .0       | .1       | .2       | .4       | .5       | .2       | .0       | .0       | .0       | 84    | .0       | 1.3            |
| -9/-10             | .0       | *        | .1       | .2       | .1       | *        | .0       | .0       | .0       | 25    | .0       | .4             |
| -11/-13            | .0       | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | 3     | .0       | *              |
| -14/-16            | .0       | *        | *        | .0       | .0       | .0       | .0       | .0       | .0       | 2     | .0       | *              |
| TOTAL              | 2        |          | 379      |          | 2757     |          | 288      |          | 2        | 6531  | 139      | 6392           |
| PCT                | *        | .3       | 5.8      | 24.5     | 42.2     | 22.4     | 4.4      | *        | *        | 100.0 | 2.1      | 97.9           |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | N   |      |       |       |       |     | PCT  | NE  |      |       |       |       |     | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |      |
| <1      | .6  | 1.7  | .1    | .0    | .0    | .0  | 2.3  | .4  | 1.2  | .1    | .0    | .0    | .0  | 1.7  |
| 1-2     | .4  | 11.5 | 4.6   | .0    | .0    | .0  | 16.5 | .2  | 5.8  | 3.8   | .0    | .0    | .0  | 9.9  |
| 3-4     | .0  | 5.0  | 13.1  | .2    | .0    | .0  | 18.3 | .1  | 3.7  | 10.5  | .4    | .0    | .0  | 14.7 |
| 5-6     | .0  | .6   | 7.5   | .4    | .0    | .0  | 8.5  | .0  | .6   | 7.0   | 1.0   | *     | .0  | 8.7  |
| 7       | .0  | .2   | 2.5   | .4    | .0    | .0  | 3.1  | .0  | .2   | 2.1   | 1.0   | .0    | .0  | 2.3  |
| 8-9     | .0  | .0   | .5    | .2    | .0    | .0  | .8   | .0  | .0   | .4    | .6    | .0    | .0  | 1.0  |
| 10-11   | .0  | .0   | *     | .2    | .0    | .0  | .2   | .0  | .0   | .1    | .2    | .0    | .0  | .3   |
| 12      | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | .1    | .0    | .0    | .0  | .2   |
| 13-16   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | *    | .0    | .1    | .0    | .0  | .1   |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.0 | 19.0 | 28.4  | 1.4   | .0    | .0  | 49.7 | .6  | 11.6 | 24.2  | 3.2   | *     | .0  | 39.7 |

| HGT     | E   |      |       |       |       |     | PCT | SE  |      |       |       |       |     | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
|         | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ |     |
| <1      | .2  | .2   | .0    | .0    | .0    | .0  | .4  | *   | .0   | .0    | .0    | .0    | .0  | *   |
| 1-2     | .1  | 1.0  | .4    | .0    | .0    | .0  | 1.4 | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 3-4     | .0  | .4   | 1.0   | .1    | .0    | .0  | 1.5 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 5-6     | .0  | .0   | .9    | .2    | .0    | .0  | 1.1 | .0  | .0   | .1    | *     | .0    | .0  | .1  |
| 7       | .0  | .0   | .3    | .2    | .0    | .0  | .5  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | .1    | .1    | .0    | .0  | .2  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | *     | .1    | .0    | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .1    | .0    | *     | .0  | .1  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 1.5  | 2.7   | .7    | *     | .0  | 3.2 | *   | *    | .1    | *     | .0    | .0  | .1  |

PERIOD: (OVER-ALL) 1963-1973

DECEMBER

AREA 0008 DAKAR  
14.8N 17.9W

TABL 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .0  | *    | .0    | .0    | .0    | .0  | *   | .1 | *   | *    | .0    | .0    | .0    | .0  | .1  |
| 1-2     | .0  | .1   | *     | .0    | .0    | .0  | .1  | *  | *   | *    | .0    | .0    | .0    | .0  | .1  |
| 3-4     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0 | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 5-6     | .0  | *    | *     | .0    | .0    | .0  | .1  | .0 | *   | *    | .0    | .0    | .0    | .0  | *   |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 8-9     | .0  | .0   | *     | .0    | .0    | .0  | *   | .0 | .0  | *    | .0    | .0    | .0    | .0  | *   |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .1 | .1  | *    | .0    | .0    | .0    | .0  | .2  |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | NW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|-----------|
| <1      | .1  | *    | .0    | .0    | .0    | .0  | .1  | .2 | .3  | .0   | .0    | .0    | .0    | .0  | .6  |           |
| 1-2     | .1  | .1   | .0    | .0    | .0    | .0  | .2  | .1 | 1.5 | .1   | .0    | .0    | .0    | .0  | 1.7 |           |
| 3-4     | .0  | *    | .0    | .0    | .0    | .0  | *   | .0 | .6  | .4   | .0    | .0    | .0    | .0  | 1.0 |           |
| 5-6     | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0 | *   | .2   | .0    | .0    | .0    | .0  | .2  |           |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | *   | *    | .0    | .0    | .0    | .0  | .1  |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .1  | .0   | .0    | .0    | .0    | .0  | .1  |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |           |
| TOT PCT | .2  | .2   | .1    | .0    | .0    | .0  | .4  | .3 | 2.5 | .7   | .0    | .0    | .0    | .0  | 3.5 | 99.1      |

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 2.9 | 3.6  | .2    | .0    | .0    | .0  | 6.7   |         |
| 1-2     | 1.0 | 19.9 | 8.8   | .0    | .0    | .0  | 29.8  |         |
| 3-4     | .1  | 9.7  | 24.8  | .7    | .0    | .0  | 35.2  |         |
| 5-6     | .0  | 1.3  | 15.6  | 1.5   | *     | .0  | 18.5  |         |
| 7       | .0  | .4   | 4.9   | 1.5   | .0    | .0  | 6.9   |         |
| 8-9     | .0  | .0   | 1.0   | 1.0   | .0    | .0  | 2.0   |         |
| 10-11   | .0  | .0   | .2    | .4    | .0    | .0  | .6    |         |
| 12      | .0  | .1   | .2    | .1    | *     | .0  | .3    |         |
| 13-16   | .0  | *    | .0    | .1    | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 3.9 | 35.0 | 55.7  | 5.3   | .1    | .0  | 100.0 | 3445    |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.2 | 10.5 | 14.5 | 9.1  | 3.4  | .8  | .3    | .1 | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1742  | 4        |
| 6-7          | *   | 1.3  | 7.0  | 8.8  | 5.6  | 1.8 | 1.0   | .3 | .3    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1135  | 5        |
| 8-9          | .0  | .3   | 2.2  | 3.2  | 2.7  | 1.9 | .7    | .2 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 499   | 6        |
| 10-11        | .0  | .6   | .8   | 1.2  | .6   | .2  | .5    | .1 | .1    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 182   | 6        |
| 12-13        | .0  | .0   | .8   | .7   | .2   | .2  | .2    | *  | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 95    | 6        |
| >13          | .0  | .0   | .0   | .4   | .1   | .1  | .1    | .0 | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 34    | 7        |
| INDET        | 2.5 | 4.7  | 4.1  | 2.4  | 1.3  | .5  | .1    | *  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 686   | 3        |
| TOTAL        | 163 | 760  | 1282 | 1131 | 611  | 236 | 126   | 33 | 29    | 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 4373  | 4        |
| PCT          | 3.7 | 17.4 | 29.3 | 25.9 | 14.0 | 5.4 | 2.9   | .8 | .7    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 |          |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 1

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

| WIND DIR       | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|                | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| N              | .6                 | .3        | .1   | .0        | .0   | .0              | *    | 1.0                     | .3             | 1.2       | 2.9         | *                   | 6.1        | 1.2             | 87.3       |
| NE             | 1.1                | .5        | .3   | .0        | .0   | .0              | *    | 1.9                     | .5             | 1.6       | 3.0         | *                   | 5.5        | 1.6             | 86.1       |
| E              | 3.1                | 1.8       | .4   | .0        | .0   | .0              | .1   | 5.4                     | 1.8            | 3.1       | 2.3         | .0                  | 7.2        | 2.5             | 78.4       |
| SE             | 4.3                | 2.4       | .7   | .0        | .0   | .0              | .0   | 7.4                     | 1.5            | 2.6       | 3.8         | .0                  | 3.7        | 1.0             | 80.6       |
| S              | 2.7                | 2.3       | .7   | .0        | .0   | .0              | .0   | 5.7                     | 1.4            | 2.3       | 4.2         | .1                  | 4.6        | 1.2             | 81.0       |
| SW             | 1.6                | 1.5       | .4   | .0        | .0   | .0              | .1   | 3.5                     | 1.7            | 3.1       | 5.4         | *                   | 5.4        | 2.6             | 78.4       |
| W              | 1.0                | 1.0       | .1   | .0        | .0   | .0              | .1   | 2.2                     | .8             | 2.1       | 4.3         | .2                  | 7.0        | 1.7             | 81.9       |
| NW             | .6                 | .3        | .2   | .0        | .0   | .0              | *    | 1.1                     | .6             | 1.8       | 4.0         | *                   | 6.6        | 1.0             | 85.0       |
| VAR            | .0                 | .0        | .0   | .0        | .0   | .0              | .0   | .0                      | .0             | .0        | .0          | .0                  | .0         | .0              | .0         |
| CALM           | .8                 | .3        | .2   | .0        | .0   | .0              | *    | 1.4                     | 1.0            | 2.5       | 4.7         | .2                  | 8.3        | 1.9             | 80.3       |
| TOT PCT        | 1.0                | .7        | .2   | .0        | .0   | .0              | *    | 1.9                     | .8             | 1.6       | 3.1         | *                   | 5.9        | 1.4             | 85.5       |
| TOT OBS: 84597 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 2

PERCENT FREQUENCY OF WEATHER OCCURRENCE BY HOUR

| HOUR (GMT)     | PRECIPITATION TYPE |           |      |           |      |                 |      | OTHER WEATHER PHENOMENA |                |           |             |                     |            |                 |            |
|----------------|--------------------|-----------|------|-----------|------|-----------------|------|-------------------------|----------------|-----------|-------------|---------------------|------------|-----------------|------------|
|                | RAIN               | RAIN SHWR | DRZL | FRZG PCPN | SNOW | OTHER FRZN PCPN | HAIL | PCPN AT DB TIME         | PCPN PAST HOUR | THDR LTNG | FGG WD PCPN | FGG WD PCPN PAST HR | SMOKE HAZE | SPRAY BLWG DUST | NO SIG MEA |
| 00003          | 1.1                | .6        | .3   | .0        | .0   | .0              | *    | 1.9                     | .7             | 3.5       | 2.5         | *                   | 5.0        | 1.2             | 85.4       |
| 06009          | 1.5                | 1.0       | .3   | .0        | .0   | .0              | *    | 2.9                     | .8             | 2.6       | 3.7         | *                   | 4.9        | 1.2             | 84.1       |
| 12015          | .7                 | .6        | .2   | .0        | .0   | .0              | *    | 1.5                     | 1.0            | .1        | 2.7         | *                   | 6.8        | 1.7             | 86.2       |
| 18021          | .7                 | .6        | .2   | .0        | .0   | .0              | *    | 1.5                     | .5             | .6        | 3.8         | *                   | 7.0        | 1.4             | 85.4       |
| TOT PCT        | 1.0                | .7        | .2   | .0        | .0   | .0              | *    | 2.0                     | .8             | 1.7       | 3.2         | *                   | 5.9        | 1.4             | 85.3       |
| TOT OBS: 87835 |                    |           |      |           |      |                 |      |                         |                |           |             |                     |            |                 |            |

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |       |     |        | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |       |       |    |
|----------|--------------------|------|-------|-------|-------|-----|--------|-----------|----------|----------|------------|-------|-------|-------|-------|-------|----|
|          | 0-3                | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | 00     |           |          |          | 03         | 06    | 09    | 12    | 15    | 18    | 21 |
| N        | 1.7                | 18.8 | 21.0  | 1.5   | *     | .0  | 43.0   | 11.1      | 43.9     | 47.3     | 43.0       | 39.1  | 41.8  | 47.8  | 45.2  | 41.2  |    |
| NE       | .8                 | 9.3  | 10.8  | 1.3   | *     | .0  | 22.1   | 11.6      | 18.9     | 13.6     | 21.1       | 28.2  | 25.5  | 17.7  | 20.6  | 23.1  |    |
| E        | .3                 | 2.0  | 1.3   | .2    | *     | .0  | 3.9    | 10.0      | 2.8      | 2.1      | 3.5        | 5.5   | 5.4   | 3.1   | 3.2   | 3.6   |    |
| SE       | .2                 | .9   | .3    | *     | *     | .0  | 1.5    | 8.0       | 1.3      | 1.3      | 1.5        | 1.9   | 1.9   | 1.8   | 1.3   | 1.2   |    |
| S        | .5                 | 1.5  | .6    | .1    | *     | .0  | 2.7    | 7.1       | 2.8      | 2.2      | 2.4        | 2.2   | 2.7   | 2.8   | 2.9   | 2.6   |    |
| SW       | .6                 | 2.6  | .8    | .1    | *     | .0  | 4.0    | 6.7       | 4.7      | 4.7      | 4.1        | 3.2   | 3.2   | 3.2   | 3.9   | 4.7   |    |
| W        | .7                 | 4.4  | 1.1   | *     | *     | .0  | 6.3    | 6.7       | 6.9      | 7.1      | 6.7        | 5.6   | 5.4   | 6.8   | 6.4   | 6.7   |    |
| NW       | 1.1                | 8.9  | 4.2   | .1    | *     | .0  | 14.4   | 8.7       | 15.9     | 17.9     | 15.0       | 12.3  | 12.4  | 15.2  | 14.7  | 14.8  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0    | .0  | .0     | .0        | .0       | .0       | .0         | .0    | .0    | .0    | .0    | .0    |    |
| CALM     | 2.2                |      |       |       |       |     | 2.2    | .0        | 2.8      | 3.9      | 2.7        | 1.9   | 1.7   | 1.7   | 1.8   | 2.1   |    |
| TOT OBS  | 8.1                | 48.4 | 40.1  | 3.3   | .1    | .0  | 149512 | 10.4      | 29599    | 1977     | 29468      | 13315 | 30541 | 2013  | 29001 | 13598 |    |
| TOT PCT  | 8.1                | 48.4 | 40.1  | 3.3   | .1    | .0  | 100.0  | 100.0     | 100.0    | 100.0    | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |    |

TABLE 3A

| WIND DIR | WIND SPEED (KNOTS) |      |       |       |     | TOTAL OBS | PCT FREQ | MEAN SPD | HOUR (GMT) |       |       |       |    |
|----------|--------------------|------|-------|-------|-----|-----------|----------|----------|------------|-------|-------|-------|----|
|          | 0-6                | 7-16 | 17-27 | 28-40 | 41+ |           |          |          | 00         | 03    | 06    | 09    | 12 |
| N        | 7.8                | 27.2 | 7.8   | .2    | *   |           | 43.0     | 11.1     | 44.1       | 41.8  | 42.1  | 43.9  |    |
| NE       | 3.8                | 13.4 | 4.7   | .2    | *   |           | 22.1     | 11.6     | 18.6       | 23.3  | 25.0  | 21.4  |    |
| E        | 1.2                | 2.0  | .6    | .1    | *   |           | 3.9      | 10.0     | 2.7        | 4.1   | 5.3   | 3.3   |    |
| SE       | .7                 | .7   | .1    | *     | .0  |           | 1.5      | 8.0      | 1.3        | 1.6   | 1.9   | 1.3   |    |
| S        | 1.3                | 1.1  | .2    | *     | .0  |           | 2.7      | 7.1      | 2.8        | 2.4   | 2.7   | 2.8   |    |
| SW       | 1.8                | 1.9  | .2    | *     | .0  |           | 4.0      | 6.7      | 4.7        | 3.8   | 3.2   | 4.2   |    |
| W        | 3.0                | 3.1  | .2    | *     | .0  |           | 6.3      | 6.7      | 6.9        | 6.3   | 5.5   | 6.5   |    |
| NW       | 4.7                | 8.6  | 1.0   | *     | .0  |           | 14.4     | 8.7      | 16.0       | 14.2  | 12.6  | 14.7  |    |
| VAR      | .0                 | .0   | .0    | .0    | .0  |           | .0       | .0       | .0         | .0    | .0    | .0    |    |
| CALM     | 2.2                |      |       |       |     |           | 2.2      | .0       | 2.9        | 2.4   | 1.7   | 1.9   |    |
| TOT OBS  | 26.5               | 58.1 | 14.8  | .5    | *   | 149512    | 100.0    | 10.4     | 31576      | 42783 | 32554 | 42599 |    |
| TOT PCT  | 26.5               | 58.1 | 14.8  | .5    | *   | 149512    | 100.0    | 10.4     | 31576      | 42783 | 32554 | 42599 |    |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

| WIND DIR | CALM | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | MEAN | PCT FREQ | TOTAL OBS |
|----------|------|-----|------|-------|-------|-------|-----|------|----------|-----------|
| 00003    | 2.9  | 5.9 | 49.8 | 38.4  | 3.0   | *     | .0  | 10.2 | 100.0    | 31576     |
| 06609    | 2.4  | 6.0 | 49.0 | 39.1  | 3.4   | .1    | .0  | 10.3 | 100.0    | 42783     |
| 12615    | 1.7  | 5.5 | 46.1 | 42.8  | 3.9   | .1    | .0  | 10.8 | 100.0    | 32554     |
| 18621    | 1.9  | 6.2 | 48.7 | 40.1  | 3.1   | .1    | .0  | 10.4 | 100.0    | 42599     |
| TOT      |      |     |      |       |       |       |     | 10.4 |          | 149512    |
| PCT      | 2.2  | 5.9 | 48.4 | 40.1  | 3.3   | .1    | .0  |      | 100.0    |           |

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)  
BY WIND DIRECTION

| WIND DIR | 0-2  | 3-4  | 5-7  | 8 &<br>OBS | TOTAL<br>OBS | MEAN<br>CLOUD<br>COVER |
|----------|------|------|------|------------|--------------|------------------------|
| N        | 28.3 | 6.6  | 8.6  | 4.1        |              | 2.8                    |
| NE       | 9.3  | 2.6  | 3.7  | 1.7        |              | 3.2                    |
| E        | 1.2  | .4   | .8   | .5         |              | 3.9                    |
| SE       | .3   | .2   | .5   | .4         |              | 4.3                    |
| S        | .7   | .5   | 1.0  | .5         |              | 3.2                    |
| SW       | 1.0  | .7   | 1.2  | .8         |              | 3.4                    |
| W        | 2.1  | 1.2  | 1.9  | 1.2        |              | 3.3                    |
| NW       | 7.3  | 2.7  | 3.8  | 2.0        |              | 2.9                    |
| VAR      | .0   | .0   | .0   | .0         |              | .0                     |
| CALM     | 1.0  | .3   | .5   | .3         |              | 3.0                    |
| TOT OBS  |      |      |      |            | 66925        |                        |
| TOT PCT  | 51.2 | 15.1 | 22.1 | 11.6       | 100.0        | 3.0                    |

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NM >4/8)  
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

|         | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | NH <5/8<br>ANY HGT | TOTAL<br>OBS |
|---------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|
| N       | .1         | *          | .1         | .7         | 2.0          | 1.6          | .8           | .4           | .4           | 1.3   | 40.4               |              |
| NE      | *          | *          | *          | .3         | .8           | .7           | .4           | .2           | .2           | .4    | 14.3               |              |
| E       | *          | *          | *          | .1         | .3           | .2           | .1           | *            | *            | .1    | 2.1                |              |
| SE      | *          | *          | *          | .1         | .2           | .1           | *            | *            | *            | *     | .8                 |              |
| S       | *          | *          | *          | .2         | .3           | .2           | .1           | *            | *            | *     | 1.8                |              |
| SW      | *          | *          | *          | .2         | .4           | .3           | .1           | .1           | *            | .1    | 2.4                |              |
| W       | *          | *          | .1         | .3         | .6           | .4           | .2           | .1           | *            | .1    | 4.5                |              |
| NW      | *          | *          | .1         | .4         | 1.3          | .9           | .3           | .1           | .1           | .4    | 12.2               |              |
| VAR     | .0         | .0         | .0         | .0         | .0           | .0           | .0           | .0           | .0           | .0    | .0                 |              |
| CALM    | *          | .0         | *          | .1         | .1           | .1           | *            | *            | *            | .1    | 1.7                |              |
| TOT OBS |            |            |            |            |              |              |              |              |              |       | 66925              |              |
| TOT PCT | .3         | .1         | .4         | 2.3        | 6.0          | 4.6          | 2.1          | .9           | .7           | 2.5   | 80.2               | 100.0        |

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE  
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

| CEILING<br>(FEET) | = OR<br>>10 | = OR<br>>5 | = OR<br>>2 | VSBY (NM)<br>= OR<br>>1 | = OR<br>>1/2 | = OR<br>>1/4 | = OR<br>>50YD | = OR<br>>0 |
|-------------------|-------------|------------|------------|-------------------------|--------------|--------------|---------------|------------|
| = OR >6500        | 2.2         | 3.1        | 3.3        | 3.3                     | 3.3          | 3.3          | 3.3           | 3.3        |
| = OR >3000        | 2.9         | 4.0        | 4.2        | 4.2                     | 4.2          | 4.2          | 4.2           | 4.2        |
| = OR >3500        | 4.5         | 5.9        | 6.2        | 6.3                     | 6.3          | 6.3          | 6.3           | 6.3        |
| = OR >2000        | 7.8         | 10.3       | 10.8       | 10.8                    | 10.8         | 10.8         | 10.8          | 10.8       |
| = OR >1000        | 12.0        | 16.0       | 16.7       | 16.7                    | 16.7         | 16.7         | 16.7          | 16.8       |
| = OR >600         | 13.5        | 18.1       | 18.9       | 19.0                    | 19.0         | 19.0         | 19.0          | 19.0       |
| = OR >300         | 13.7        | 18.5       | 19.3       | 19.4                    | 19.4         | 19.4         | 19.4          | 19.4       |
| = OR >150         | 13.7        | 18.5       | 19.4       | 19.5                    | 19.5         | 19.5         | 19.5          | 19.5       |
| = OR >0           | 13.8        | 18.6       | 19.6       | 19.7                    | 19.7         | 19.7         | 19.8          | 19.8       |

TOTAL NUMBER OF OBS: 69022

PCT FREQ NH <5/8: 80.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

|  | 0    | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8   | OBSCD | TOTAL<br>OBS |
|--|------|------|-----|-----|-----|-----|-----|-----|-----|-------|--------------|
|  | 46.0 | 10.5 | 9.4 | 7.5 | 6.0 | 4.0 | 4.8 | 4.4 | 7.2 | .2    | 72053        |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF  
PRECIPITATION WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) |        | N     | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|--------|-------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | PCP    | *     | *    | *   | *   | *   | *   | *   | *    | .0  | .0   | *     |              |
|              | NO PCP | *     | *    | *   | .0  | *   | *   | *   | *    | .0  | *    | .1    |              |
|              | TOT %  | *     | *    | *   | *   | *   | *   | *   | *    | .0  | *    | .1    |              |
| 1/2<1        | PCP    | *     | *    | *   | *   | *   | *   | .0  | *    | .0  | .0   | *     |              |
|              | NO PCP | .7    | .3   | *   | *   | *   | *   | .1  | .3   | .0  | *    | 1.5   |              |
|              | TOT %  | .7    | .3   | *   | *   | *   | *   | .1  | .3   | .0  | *    | 1.5   |              |
| 1<2          | PCP    | *     | *    | *   | *   | *   | *   | *   | *    | .0  | .0   | *     |              |
|              | NO PCP | .5    | .2   | .1  | *   | *   | *   | .1  | .2   | .0  | *    | 1.1   |              |
|              | TOT %  | .5    | .2   | .1  | *   | *   | *   | .1  | .2   | .0  | *    | 1.2   |              |
| 2<5          | PCP    | *     | *    | *   | *   | *   | *   | *   | *    | .0  | *    | .2    |              |
|              | NO PCP | 1.5   | .5   | .1  | *   | *   | .1  | .2  | .6   | .0  | .1   | 3.1   |              |
|              | TOT %  | 1.5   | .5   | .2  | *   | .1  | .1  | .2  | .6   | .0  | .1   | 3.3   |              |
| 5<10         | PCP    | .2    | .1   | .1  | .1  | .2  | .1  | .1  | .0   | *   | 1.0  |       |              |
|              | NO PCP | 11.7  | 4.1  | .7  | .3  | .6  | .9  | 1.7 | 4.5  | .0  | .5   | 25.0  |              |
|              | TOT %  | 11.9  | 4.2  | .8  | .4  | .7  | 1.1 | 1.9 | 4.7  | .0  | .5   | 26.0  |              |
| 10+          | PCP    | .1    | .1   | *   | .1  | .1  | .1  | .1  | .0   | *   | .6   |       |              |
|              | NO PCP | 32.0  | 12.5 | 2.0 | .9  | 1.9 | 2.5 | 4.2 | 9.9  | .0  | 1.4  | 67.3  |              |
|              | TOT %  | 32.1  | 12.5 | 2.0 | 1.0 | 2.0 | 2.6 | 4.3 | 10.0 | .0  | 1.4  | 67.9  |              |
| TOT OBS      |        | 84492 |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |        | 46.8  | 17.8 | 3.1 | 1.4 | 2.8 | 3.8 | 6.6 | 15.8 | .0  | 2.0  | 100.0 |              |

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED  
WITH VARYING VALUES OF VISIBILITY

| VSBY<br>(NM) | SPD<br>KTS | N      | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM | PCT   | TOTAL<br>OBS |
|--------------|------------|--------|------|-----|-----|-----|-----|-----|------|-----|------|-------|--------------|
| <1/2         | 0-3        | *      | *    | *   | *   | *   | *   | *   | *    | .0  | *    | *     |              |
|              | 4-10       | *      | .0   | .0  | .0  | *   | *   | *   | *    | .0  | *    | *     |              |
|              | 11-21      | *      | *    | *   | *   | *   | *   | *   | *    | .0  | *    | *     |              |
|              | 22+        | *      | *    | *   | *   | *   | .0  | .0  | .0   | .0  | *    | *     |              |
|              | TOT %      | *      | *    | *   | *   | *   | *   | .0  | .0   | .0  | *    | .1    |              |
| 1/2<1        | 0-3        | *      | *    | *   | *   | *   | *   | *   | *    | .0  | *    | .1    |              |
|              | 4-10       | .3     | .1   | *   | *   | *   | *   | .1  | .1   | .0  | *    | .6    |              |
|              | 11-21      | .3     | .1   | *   | *   | *   | *   | *   | .1   | .0  | *    | .5    |              |
|              | 22+        | *      | *    | *   | *   | .0  | .0  | .0  | *    | .0  | *    | *     |              |
|              | TOT %      | .6     | .2   | *   | *   | *   | *   | .1  | .2   | .0  | *    | 1.2   |              |
| 1<2          | 0-3        | *      | *    | *   | *   | *   | *   | *   | *    | .0  | *    | .1    |              |
|              | 4-10       | .2     | .1   | *   | *   | *   | *   | .1  | .1   | .0  | *    | .5    |              |
|              | 11-21      | .2     | .1   | *   | *   | *   | *   | *   | *    | .0  | *    | .4    |              |
|              | 22+        | *      | *    | *   | .0  | .0  | *   | *   | *    | .0  | *    | .1    |              |
|              | TOT %      | .5     | .2   | .1  | *   | *   | *   | .1  | .2   | .0  | *    | 1.1   |              |
| 2<5          | 0-3        | .1     | *    | *   | *   | *   | *   | *   | .1   | .0  | .1   | .4    |              |
|              | 4-10       | .7     | .3   | .1  | *   | *   | .1  | .2  | .4   | .0  | *    | 1.7   |              |
|              | 11-21      | .7     | .3   | .1  | *   | *   | *   | *   | .2   | .0  | *    | 1.4   |              |
|              | 22+        | .1     | .1   | *   | *   | *   | *   | *   | *    | .0  | *    | .2    |              |
|              | TOT %      | 1.6    | .7   | .2  | .1  | .1  | .1  | .3  | .6   | .0  | .1   | 3.7   |              |
| 5<10         | 0-3        | .4     | .2   | .1  | *   | .1  | .2  | .3  | .0   | .5  | 2.0  |       |              |
|              | 4-10       | 4.8    | 2.0  | .4  | .2  | .3  | .6  | 1.2 | 2.6  | .0  | 12.2 |       |              |
|              | 11-21      | 5.7    | 2.2  | .3  | .1  | .2  | .2  | .4  | 1.4  | .0  | 10.4 |       |              |
|              | 22+        | .5     | .3   | .1  | *   | *   | *   | *   | .1   | .0  | .9   |       |              |
|              | TOT %      | 11.3   | 4.6  | .9  | .4  | .6  | 1.0 | 1.8 | 4.4  | .0  | .5   | 25.6  |              |
| 10+          | 0-3        | 1.2    | .5   | .2  | .1  | .3  | .3  | .5  | .7   | .0  | 1.5  | 5.3   |              |
|              | 4-10       | 13.4   | 6.0  | 1.2 | .6  | 1.2 | 1.7 | 3.0 | 6.2  | .0  | 33.3 |       |              |
|              | 11-21      | 15.5   | 7.1  | .7  | .2  | .4  | .5  | .7  | 2.8  | .0  | 28.0 |       |              |
|              | 22+        | .9     | .7   | .1  | *   | *   | *   | *   | .1   | .0  | 1.8  |       |              |
|              | TOT %      | 31.0   | 14.2 | 2.2 | 1.0 | 1.9 | 2.6 | 4.2 | 9.7  | .0  | 1.5  | 68.3  |              |
| TOT OBS      |            | 111721 |      |     |     |     |     |     |      |     |      |       |              |
| TOT PCT      |            | 44.9   | 20.0 | 3.4 | 1.4 | 2.7 | 3.8 | 6.4 | 15.2 | .0  | 2.2  | 100.0 |              |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH > 4/8) AND  
OCCURRENCE OF NH < 5/8 BY HOUR

| HOURL<br>(GMT) | 000<br>149 | 150<br>299 | 300<br>599 | 600<br>999 | 1000<br>1999 | 2000<br>3499 | 3500<br>4999 | 5000<br>6499 | 6500<br>7999 | 8000+ | TOTAL | NH < 5/8<br>ANY HGT | TOTAL<br>OBS   |
|----------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|-------|-------|---------------------|----------------|
| 00003          | .3         | *          | .4         | 2.0        | 5.0          | 3.6          | 1.8          | .7           | .6           | 2.2   | 16.6  | 83.4                | 17178          |
| 06009          | .4         | .1         | .4         | 2.9        | 7.0          | 5.0          | 2.2          | .9           | .6           | 2.6   | 22.2  | 77.8                | 17246          |
| 12015          | .2         | .1         | .4         | 2.1        | 5.7          | 4.8          | 2.0          | .9           | .8           | 2.6   | 19.6  | 80.4                | 19033          |
| 18021          | .2         | *          | .4         | 1.8        | 5.3          | 4.4          | 2.1          | 1.0          | .9           | 2.7   | 18.8  | 81.2                | 17405          |
| TOT<br>PCT     | .3         | .1         | .4         | 2.2        | 5.8          | 4.5          | 2.0          | .9           | .7           | 2.5   | 19.3  | 80.7                | 70862<br>100.0 |

TABLE 11

PERCENT FREQUENCY VS BY (NH) BY HOUR

| HOURL<br>(GMT) | <1/2 | 1/2<1 | 1<2 | 2<5 | 5<10 | 10+  | TOTAL<br>OBS    |
|----------------|------|-------|-----|-----|------|------|-----------------|
| 00003          | .1   | .9    | .8  | 3.4 | 24.3 | 70.4 | 26054           |
| 06009          | .2   | 1.5   | 1.2 | 3.4 | 27.5 | 66.2 | 31118           |
| 12015          | .1   | .9    | 1.1 | 4.2 | 23.6 | 70.1 | 27014           |
| 18021          | .1   | 1.5   | 1.5 | 3.9 | 27.0 | 66.0 | 30801           |
| TOT<br>PCT     | .1   | 1.2   | 1.2 | 3.7 | 25.7 | 68.0 | 114987<br>100.0 |

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VS BY (NH) AND/OR  
CEILING HGT (FEET, NH > 4/8) BY HOUR

| HOURL<br>(GMT) | <150<br><50'VD | <600<br><1 | <1000<br><5 | 1000+<br>AND 5+ | NH < 5/8<br>AND 5+ | TOTAL<br>OBS   |
|----------------|----------------|------------|-------------|-----------------|--------------------|----------------|
| 00003          | .3             | .8         | 5.9         | 13.5            | 80.6               | 16684          |
| 06009          | .4             | 1.0        | 7.1         | 18.0            | 74.9               | 16754          |
| 12015          | .2             | .7         | 6.8         | 16.3            | 76.9               | 18609          |
| 18021          | .2             | .7         | 6.4         | 16.0            | 77.6               | 16975          |
| TOT<br>PCT     | .3             | .8         | 6.5         | 16.0            | 77.5               | 69022<br>100.0 |

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

| TEMP F       | 0-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | TOTAL<br>OBS | PCT<br>FREQ |
|--------------|------|-------|-------|-------|-------|-------|-------|--------|--------------|-------------|
| 90/94        | .0   | *     | *     | *     | .1    | *     | *     | .0     | .1           | .1          |
| 85/89        | .0   | *     | *     | .1    | .5    | 1.2   | .3    | .1     | 2.2          | .1          |
| 80/84        | .0   | *     | .1    | .4    | 2.1   | 10.4  | 10.9  | 1.7    | 25.5         | .5          |
| 75/79        | .0   | *     | .1    | .7    | 2.2   | 8.2   | 11.1  | 3.6    | 26.0         | .5          |
| 70/74        | .0   | *     | .2    | .9    | 2.9   | 7.5   | 10.2  | 4.1    | 25.7         | .5          |
| 65/69        | .0   | *     | .1    | .5    | 1.2   | 3.9   | 8.8   | 4.6    | 19.1         | .1          |
| 60/64        | .0   | .0    | *     | *     | .1    | .2    | .6    | .6     | 1.4          | *           |
| 55/59        | .0   | .0    | .0    | .0    | .0    | *     | .0    | *      | *            | *           |
| TOTAL<br>PCT | .0   | *     | .5    | 2.6   | 9.0   | 31.4  | 41.9  | 14.6   | 70994        | 100.0       |

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

|       | N    | NE   | E   | SE  | S   | SW  | W   | NW   | VAR | CALM |
|-------|------|------|-----|-----|-----|-----|-----|------|-----|------|
| 90/94 | .1   | *    | *   | *   | *   | *   | *   | *    | .0  | *    |
| 85/89 | .9   | .3   | .1  | .1  | .1  | .1  | .2  | .3   | .0  | .1   |
| 80/84 | 8.0  | 3.2  | .9  | .7  | 1.6 | 2.0 | 3.2 | 4.9  | .0  | .9   |
| 75/79 | 10.6 | 4.5  | .9  | .4  | .7  | 1.2 | 2.3 | 4.8  | .0  | .5   |
| 70/74 | 14.5 | 5.5  | .7  | .1  | .1  | .2  | .6  | 3.6  | .0  | .3   |
| 65/69 | 12.4 | 3.7  | .4  | .1  | .1  | .1  | .2  | 2.1  | .0  | .1   |
| 60/64 | .9   | .3   | *   | *   | *   | *   | *   | .2   | .0  | *    |
| 55/59 | *    | *    | .0  | .0  | *   | *   | .0  | .0   | .0  | .0   |
| TOTAL | 47.3 | 17.6 | 3.0 | 1.3 | 2.7 | 3.7 | 6.6 | 15.8 | .0  | 2.0  |

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

| HOURL<br>(GMT) | MAX | 99% | 95% | 50% | 5% | 1% | MIN | MEAN | TOTAL<br>OBS |
|----------------|-----|-----|-----|-----|----|----|-----|------|--------------|
| 00003          | 91  | 80  | 79  | 74  | 69 | 67 | 57  | 73.9 | 32364        |
| 06009          | 92  | 81  | 78  | 74  | 69 | 67 | 55  | 73.7 | 43441        |
| 12015          | 95  | 85  | 82  | 76  | 71 | 69 | 55  | 76.5 | 32616        |
| 18021          | 95  | 85  | 81  | 76  | 71 | 69 | 57  | 75.8 | 42664        |
| TOT            | 95  | 84  | 81  | 75  | 70 | 68 | 55  | 75.0 | 151085       |

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

| HOUR<br>(GMT) | 0-29 | 30-39 | 60-69 | 70-79 | 80-89 | 90-100 | MEAN | TOTAL<br>OBS |
|---------------|------|-------|-------|-------|-------|--------|------|--------------|
| 00003         | .0   | .9    | 4.6   | 23.7  | 49.6  | 21.2   | 83   | 17956        |
| 06009         | .0   | 2.6   | 5.9   | 22.3  | 47.9  | 21.3   | 82   | 18662        |
| 12015         | .0   | 6.3   | 14.6  | 40.6  | 31.3  | 7.3    | 76   | 18742        |
| 18021         | .0   | 2.7   | 10.6  | 38.2  | 39.0  | 9.5    | 79   | 18296        |
| TOT           | 0    | 2240  | 6471  | 23009 | 31008 | 10928  | 80   | 73656        |



PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

ANNUAL

AREA 0008 DAKAR  
14.9N 17.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)  
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

| AIR-SEA<br>TMP DIF | 57<br>60 | 61<br>64 | 65<br>68 | 69<br>72 | 73<br>76 | 77<br>80 | 81<br>84 | 85<br>88 | 89<br>92 | >92 | TOT   | N<br>FOG | NO<br>FOG |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-------|----------|-----------|
| 20/22              | .0       | .0       | .0       | .0       | .0       | .0       | *        | *        | *        | .0  | 4     | .0       | *         |
| 17/19              | .0       | .0       | .0       | .0       | *        | *        | *        | *        | *        | .0  | 19    | *        | *         |
| 14/16              | .0       | .0       | .0       | *        | *        | *        | *        | *        | *        | *   | 67    | *        | .1        |
| 11/13              | .0       | .0       | *        | *        | .1       | .1       | .1       | *        | *        | *   | 276   | *        | .3        |
| 9/10               | .0       | .0       | *        | .1       | .1       | .2       | .1       | *        | *        | *   | 449   | *        | .5        |
| 7/8                | .0       | *        | *        | .2       | .4       | .3       | .2       | .1       | .1       | .0  | 1069  | .1       | 1.3       |
| 6                  | .0       | .0       | .1       | .3       | .4       | .3       | .2       | .1       | *        | .0  | 1040  | .1       | 1.3       |
| 5                  | *        | *        | .2       | .7       | .8       | .4       | .3       | .2       | *        | .0  | 2070  | .1       | 2.5       |
| 4                  | .0       | *        | .5       | 1.1      | 1.0      | .5       | .4       | .3       | *        | .0  | 3010  | .2       | 3.7       |
| 3                  | *        | *        | .9       | 1.7      | 1.3      | .7       | .8       | .4       | *        | .0  | 4561  | .3       | 5.6       |
| 2                  | *        | .1       | 1.6      | 2.6      | 1.7      | 1.1      | 1.6      | .4       | *        | .0  | 7040  | .4       | 8.6       |
| 1                  | *        | .3       | 2.4      | 3.3      | 2.4      | 1.9      | 2.8      | .3       | .0       | .0  | 10476 | .6       | 12.8      |
| 0                  | *        | .3       | 2.7      | 3.4      | 2.6      | 3.3      | 4.1      | .2       | .0       | .0  | 12812 | .6       | 15.9      |
| -1                 | *        | .2       | 2.1      | 2.7      | 2.5      | 4.6      | 4.2      | .1       | .0       | .0  | 12738 | .5       | 15.9      |
| -2                 | *        | .2       | 1.3      | 1.9      | 1.9      | 4.3      | 2.2      | *        | .0       | .0  | 9193  | .3       | 11.5      |
| -3                 | *        | .1       | .8       | 1.1      | 1.6      | 3.2      | .9       | *        | .0       | .0  | 6001  | .1       | 7.6       |
| -4                 | *        | .1       | .5       | .7       | 1.0      | 1.7      | .4       | *        | .0       | .0  | 3288  | .1       | 4.1       |
| -5                 | .0       | .1       | .2       | .4       | .7       | 1.0      | .2       | .0       | .0       | .0  | 2008  | *        | 2.5       |
| -6                 | *        | *        | .1       | .2       | .4       | .3       | *        | .0       | .0       | .0  | 836   | *        | 1.1       |
| -7/-8              | *        | *        | .1       | .2       | .3       | .2       | *        | .0       | .0       | .0  | 706   | *        | .9        |
| -9/-10             | *        | *        | *        | .1       | .1       | .1       | *        | .0       | .0       | .0  | 226   | *        | .3        |
| -11/-13            | *        | *        | *        | *        | *        | *        | .0       | .0       | .0       | .0  | 72    | *        | .1        |
| -14/-16            | .0       | *        | *        | *        | .0       | .0       | .0       | .0       | .0       | .0  | 8     | .0       | *         |
| TOTAL              |          |          |          |          |          |          |          |          |          |     | 77969 |          |           |
| PCT                | *        | 1.4      | 13.6     | 20.6     | 19.2     | 24.1     | 18.6     | 2.3      | .2       | *   | 100.0 | 3.4      | 96.6      |

PERIOD: (OVER-ALL) 1963-1973

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  |
|---------|-----|------|-------|-------|-------|-----|------|-----|------|-------|-------|-------|-----|------|
| <1      | .8  | 2.3  | .2    | .0    | .0    | .0  | 3.3  | .2  | .8   | .1    | .0    | .0    | .0  | 1.2  |
| 1-2     | .7  | 10.8 | 4.9   | .0    | .0    | .0  | 16.3 | .2  | 3.5  | 1.5   | .0    | .0    | .0  | 5.2  |
| 3-4     | .1  | 5.5  | 10.6  | .3    | .0    | .0  | 16.5 | *   | 1.7  | 3.4   | .1    | .0    | .0  | 5.3  |
| 5-6     | *   | 1.0  | 6.8   | .4    | *     | .0  | 8.3  | *   | .3   | 2.2   | .3    | *     | .0  | 2.8  |
| 7       | .0  | .1   | 2.7   | .5    | *     | .0  | 3.3  | .0  | .1   | .8    | .2    | .0    | .0  | 1.1  |
| 8-9     | .0  | *    | .6    | .2    | *     | .0  | .9   | .0  | *    | .2    | .1    | *     | .0  | .3   |
| 10-11   | .0  | *    | .2    | .2    | .0    | .0  | .4   | .0  | .0   | *     | .1    | .0    | .0  | .1   |
| 12      | .0  | *    | *     | *     | *     | .0  | .1   | .0  | .0   | *     | *     | *     | .0  | *    |
| 13-16   | .0  | *    | *     | *     | .0    | .0  | .1   | .0  | *    | *     | *     | *     | .0  | *    |
| 17-19   | .0  | .0   | *     | .0    | .0    | .0  | *    | .0  | .0   | *     | *     | *     | .0  | *    |
| 20-22   | .0  | .0   | .0    | *     | .0    | .0  | *    | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0   | .0  | .0   | .0    | .0    | .0    | .0  | .0   |
| TOT PCT | 1.5 | 19.9 | 26.0  | 1.7   | *     | .0  | 49.1 | .5  | 6.4  | 8.2   | .9    | *     | .0  | 16.0 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|-----|------|-------|-------|-------|-----|-----|
| <1      | .1  | .2   | *     | .0    | .0    | .0  | .3  | .1  | .1   | *     | .0    | .0    | .0  | .2  |
| 1-2     | .1  | .7   | .2    | .0    | .0    | .0  | .9  | *   | .3   | .1    | .0    | .0    | .0  | .5  |
| 3-4     | *   | .3   | .4    | *     | .0    | .0  | .8  | *   | .2   | .1    | *     | .0    | .0  | .3  |
| 5-6     | *   | *    | .2    | *     | *     | .0  | .3  | .0  | *    | .1    | *     | .0    | .0  | .1  |
| 7       | .0  | *    | .1    | .1    | *     | .0  | .2  | .0  | *    | *     | *     | .0    | .0  | *   |
| 8-9     | .0  | *    | *     | *     | *     | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 10-11   | .0  | .0   | *     | *     | *     | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 12      | .0  | .0   | *     | *     | *     | .0  | *   | .0  | .0   | *     | *     | .0    | .0  | *   |
| 13-16   | .0  | .0   | .0    | *     | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | *     | *     | .0  | *   | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .2  | 1.2  | .9    | .2    | *     | .0  | 2.6 | .1  | .7   | .3    | *     | .0    | .0  | 1.1 |

PERIOD: (OVER-ALL) 1963-1973

ANNUAL

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14.9N 17.9W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | SW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|-----|
| <1      | .2  | .3   | .2    | .0    | .0    | .0  | .5  | .2 | .4  | .0   | .0    | .0    | .0    | .0  | .7  |
| 1-2     | .1  | .9   | .2    | .0    | .0    | .0  | 1.1 | .1 | 1.3 | .2   | .0    | .0    | .0    | .0  | 1.7 |
| 3-4     | .0  | .3   | .3    | .0    | .0    | .0  | .6  | .0 | .5  | .3   | .0    | .0    | .0    | .0  | .8  |
| 5-6     | .0  | .1   | .1    | .0    | .0    | .0  | .2  | .0 | .1  | .2   | .0    | .0    | .0    | .0  | .3  |
| 7       | .0  | .0   | .0    | .0    | .0    | .0  | .1  | .0 | .0  | .1   | .0    | .0    | .0    | .0  | .1  |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0  |
| TOT PCT | .3  | 1.6  | .6    | .1    | .0    | .0  | 2.6 | .4 | 2.3 | .8   | .0    | .0    | .0    | .0  | 3.5 |

| HGT     | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT | NW | 1-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT  | TOTAL PCT |
|---------|-----|------|-------|-------|-------|-----|-----|----|-----|------|-------|-------|-------|-----|------|-----------|
| <1      | .3  | .9   | .0    | .0    | .0    | .0  | 1.2 | .5 | 1.5 | .1   | .0    | .0    | .0    | .0  | 2.0  |           |
| 1-2     | .3  | 2.7  | .3    | .0    | .0    | .0  | 3.3 | .3 | 5.7 | 1.3  | .0    | .0    | .0    | .0  | 7.3  |           |
| 3-4     | .0  | .8   | .5    | .0    | .0    | .0  | 1.4 | .0 | 2.3 | 2.3  | .0    | .0    | .0    | .0  | 4.7  |           |
| 5-6     | .0  | .1   | .3    | .0    | .0    | .0  | .4  | .0 | .4  | 1.2  | .0    | .0    | .0    | .0  | 1.6  |           |
| 7       | .0  | .0   | .1    | .0    | .0    | .0  | .1  | .0 | .0  | .3   | .0    | .0    | .0    | .0  | .4   |           |
| 8-9     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .1   | .0    | .0    | .0    | .0  | .1   |           |
| 10-11   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 13-16   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0  | .0 | .0  | .0   | .0    | .0    | .0    | .0  | .0   |           |
| TOT PCT | .6  | 4.5  | 1.3   | .0    | .0    | .0  | 6.5 | .8 | 9.8 | 5.2  | .2    | .0    | .0    | .0  | 16.1 |           |

|      |
|------|
| 97.4 |
|------|

WIND SPEED (KTS) VS SEA HEIGHT (FT)

| HGT     | 0-3 | 4-10 | 11-21 | 22-33 | 34-47 | 48+ | PCT   | TOT OBS |
|---------|-----|------|-------|-------|-------|-----|-------|---------|
| <1      | 6.0 | 6.6  | .4    | .0    | .0    | .0  | 13.0  |         |
| 1-2     | 2.2 | 25.5 | 8.4   | .0    | .0    | .0  | 36.1  |         |
| 3-4     | .2  | 11.4 | 17.6  | .5    | .0    | .0  | 29.8  |         |
| 5-6     | .0  | 1.9  | 11.0  | .9    | .0    | .0  | 13.8  |         |
| 7       | .0  | .3   | 4.0   | .9    | .0    | .0  | 5.2   |         |
| 8-9     | .0  | .1   | .0    | .9    | .0    | .0  | 1.4   |         |
| 10-11   | .0  | .0   | .2    | .3    | .0    | .0  | .5    |         |
| 12      | .0  | .0   | .0    | .0    | .0    | .0  | .1    |         |
| 13-16   | .0  | .0   | .0    | .1    | .0    | .0  | .1    |         |
| 17-19   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 20-22   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 23-25   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 26-32   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 33-40   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 41-48   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 49-60   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 61-70   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 71-86   | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| 87+     | .0  | .0   | .0    | .0    | .0    | .0  | .0    |         |
| TOT PCT | 8.5 | 45.8 | 42.6  | 3.1   | .1    | .0  | 100.0 | 43097   |

PERIOD: (OVER-ALL) 1949-1973

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

| PERIOD (SEC) | <1  | 1-2  | 3-4  | 5-6  | 7    | 8-9 | 10-11 | 12 | 13-16 | 17-19 | 20-22 | 23-25 | 26-32 | 33-40 | 41-48 | 49-60 | 61-70 | 71-86 | 87+ | TOTAL | MEAN HGT |
|--------------|-----|------|------|------|------|-----|-------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|----------|
| <6           | 1.8 | 11.2 | 13.6 | 6.9  | 2.7  | .7  | .3    | .1 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 20440 | 3        |
| 6-7          | .0  | 1.7  | 7.2  | 8.2  | 4.5  | 1.5 | .8    | .2 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 13323 | 5        |
| 8-9          | .0  | .6   | 2.3  | 3.4  | 2.8  | 1.4 | .7    | .2 | .2    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 6378  | 6        |
| 10-11        | .0  | .6   | .7   | 1.0  | .9   | .3  | .4    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 2351  | 6        |
| 12-13        | .0  | .0   | 1.0  | .6   | .3   | .2  | .1    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 1256  | 5        |
| >13          | .0  | .0   | .0   | .5   | .3   | .1  | .1    | .0 | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 550   | 7        |
| INDET        | 3.7 | 5.0  | 5.0  | 2.9  | 1.5  | .5  | .2    | .1 | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 10446 | 3        |
| TOTAL PCT    | 5.6 | 19.0 | 29.8 | 23.4 | 13.1 | 5.0 | 2.6   | .8 | .5    | .1    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0  | 100.0 | 4        |

PERIOD: (PRIMARY) 1921-1973  
(OVER-ALL) 1854-1973

TABLE 20

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14.9N 17.9W

| PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| SEA TMP<br>DEG F   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   | OCT   | NOV   | DEC   | ANN   | PCT   |  |
| 96+  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 95/96  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 93/94  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 91/92  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 1     | *     |  |
| 89/90  | .0    | .0    | .0    | .0    | .0    | .4    | .1    | .1    | .1    | .1    | .1    | .0    | 38    | *     |  |
| 87/88  | .0    | .0    | .0    | .0    | .1    | .1    | .2    | .3    | .4    | .5    | .2    | .1    | 215   | .2    |  |
| 85/86  | .0    | .0    | .0    | .1    | .1    | .7    | 2.0   | 7.1   | 3.4   | 4.5   | 1.3   | .2    | 1661  | 1.2   |  |
| 83/84  | .1    | .1    | .1    | .1    | .2    | 4.3   | 10.9  | 12.2  | 20.8  | 24.9  | 7.5   | .8    | 9476  | 6.7   |  |
| 81/82  | .3    | .1    | .2    | .3    | 1.7   | 13.1  | 32.4  | 43.5  | 49.9  | 42.9  | 22.6  | 3.5   | 24417 | 17.3  |  |
| 79/80  | .5    | .2    | .3    | .5    | 3.5   | 14.3  | 21.2  | 26.0  | 19.1  | 17.3  | 23.0  | 7.1   | 15490 | 11.0  |  |
| 77/78  | 1.7   | .5    | .4    | 1.7   | 6.3   | 13.4  | 13.5  | 10.7  | 4.6   | 6.7   | 21.3  | 12.7  | 10989 | 7.8   |  |
| 75/76  | 4.5   | 1.8   | 1.9   | 3.5   | 9.4   | 14.1  | 10.2  | 9.7   | 1.0   | 2.0   | 13.5  | 19.1  | 10017 | 7.1   |  |
| 73/74  | 11.5  | 5.6   | 5.2   | 7.2   | 16.0  | 16.8  | 6.6   | .9    | .5    | .7    | 7.4   | 23.8  | 12139 | 8.6   |  |
| 71/72  | 19.0  | 11.4  | 11.5  | 13.6  | 21.2  | 13.1  | 2.2   | .3    | .2    | .3    | 2.1   | 16.9  | 13330 | 9.4   |  |
| 69/70  | 21.2  | 18.8  | 19.5  | 21.3  | 21.2  | 6.7   | .6    | .2    | *     | .1    | .8    | 9.6   | 14301 | 10.1  |  |
| 67/68  | 20.6  | 25.6  | 25.3  | 25.0  | 19.3  | 2.5   | .1    | *     | *     | *     | .3    | 4.5   | 13958 | 9.9   |  |
| 65/66  | 12.2  | 19.3  | 19.9  | 16.8  | 5.0   | .6    | *     | *     | *     | .0    | *     | 1.3   | 8921  | 6.3   |  |
| 63/64  | 6.7   | 13.2  | 12.8  | 8.4   | 1.7   | .2    | *     | .0    | .0    | .0    | .0    | .4    | 5152  | 3.6   |  |
| 61/62  | 1.3   | 3.1   | 2.5   | 1.3   | .3    | *     | *     | .0    | .0    | .0    | .0    | .1    | 1002  | .7    |  |
| 59/60  | .4    | .5    | .4    | .3    | *     | *     | .0    | .0    | .0    | .0    | .0    | *     | 201   | .1    |  |
| 57/58  | .1    | *     | .1    | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 26    | *     |  |
| 55/56  | *     | *     | *     | *     | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 8     | *     |  |
| 53/54  | .0    | .0    | *     | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 1     | *     |  |
| 51/52  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 49/50  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 47/48  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 45/46  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 43/44  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 41/42  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 39/40  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 37/38  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 35/36  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 33/34  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 31/32  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 29/30  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| 27/28  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| <27  | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | .0    | 0     | .0    |  |
| TOTAL  | 11657 | 11205 | 12528 | 11917 | 12386 | 11864 | 11820 | 11803 | 10931 | 11945 | 11346 | 11921 | 14134 | 100.0 |  |
| MEAN   | 69.4  | 67.7  | 67.8  | 68.7  | 71.6  | 76.0  | 79.4  | 80.5  | 81.4  | 81.4  | 78.6  | 74.0  | 74.7  |       |  |

TABLE 21

PRESSURE (MB)

| AVERAGE BY HOUR (GMT) |       |      |       |      |       |      |       |      |      |  | TOTAL<br>OBS |
|-----------------------|-------|------|-------|------|-------|------|-------|------|------|--|--------------|
| MO                    | 0000  | 0300 | 0600  | 0900 | 1200  | 1500 | 1800  | 2100 | MEAN |  |              |
| JAN                   | 1014  | 1014 | 1013  | 1014 | 1015  | 1013 | 1013  | 1014 | 1014 |  | 8524         |
| FEB                   | 1014  | 1012 | 1012  | 1014 | 1014  | 1012 | 1012  | 1013 | 1013 |  | 8471         |
| MAR                   | 1013  | 1011 | 1012  | 1013 | 1013  | 1012 | 1011  | 1012 | 1012 |  | 9404         |
| APR                   | 1013  | 1011 | 1012  | 1013 | 1013  | 1011 | 1011  | 1012 | 1012 |  | 9007         |
| MAY                   | 1013  | 1012 | 1012  | 1013 | 1014  | 1012 | 1011  | 1012 | 1013 |  | 9184         |
| JUN                   | 1014  | 1013 | 1013  | 1014 | 1014  | 1013 | 1013  | 1014 | 1014 |  | 9043         |
| JUL                   | 1014  | 1013 | 1013  | 1014 | 1014  | 1013 | 1012  | 1013 | 1013 |  | 8862         |
| AUG                   | 1013  | 1012 | 1012  | 1013 | 1013  | 1012 | 1011  | 1012 | 1012 |  | 8974         |
| SEP                   | 1013  | 1012 | 1012  | 1013 | 1013  | 1012 | 1012  | 1013 | 1013 |  | 8263         |
| OCT                   | 1013  | 1012 | 1012  | 1013 | 1014  | 1012 | 1012  | 1013 | 1013 |  | 8937         |
| NOV                   | 1013  | 1012 | 1012  | 1013 | 1013  | 1011 | 1011  | 1013 | 1012 |  | 8044         |
| DEC                   | 1014  | 1013 | 1013  | 1014 | 1014  | 1012 | 1012  | 1013 | 1013 |  | 8663         |
| ANN                   | 1013  | 1012 | 1012  | 1013 | 1014  | 1012 | 1012  | 1013 | 1013 |  | 105376       |
| OBS                   | 22197 | 2092 | 21950 | 6019 | 23296 | 2083 | 21727 | 6012 |      |  |              |

PERCENTILES

| MO  | MIN  | 1%   | 5%   | 25%  | 50%  | 75%  | 95%  | 99%  | MAX  |
|-----|------|------|------|------|------|------|------|------|------|
| JAN | 998  | 1007 | 1010 | 1012 | 1014 | 1015 | 1018 | 1021 | 1034 |
| FEB | 1001 | 1007 | 1009 | 1011 | 1013 | 1015 | 1017 | 1020 | 1028 |
| MAR | 998  | 1005 | 1008 | 1011 | 1012 | 1014 | 1016 | 1019 | 1027 |
| APR | 1001 | 1007 | 1009 | 1011 | 1012 | 1014 | 1016 | 1018 | 1026 |
| MAY | 999  | 1007 | 1009 | 1011 | 1013 | 1014 | 1016 | 1018 | 1026 |
| JUN | 1000 | 1008 | 1010 | 1012 | 1014 | 1015 | 1017 | 1019 | 1025 |
| JUL | 1001 | 1008 | 1010 | 1012 | 1013 | 1015 | 1017 | 1019 | 1026 |
| AUG | 1001 | 1007 | 1009 | 1011 | 1012 | 1014 | 1016 | 1017 | 1025 |
| SEP | 1003 | 1007 | 1009 | 1011 | 1013 | 1014 | 1016 | 1018 | 1025 |
| OCT | 1000 | 1008 | 1009 | 1011 | 1013 | 1014 | 1016 | 1018 | 1026 |
| NOV | 997  | 1007 | 1009 | 1011 | 1012 | 1014 | 1016 | 1018 | 1025 |
| DEC | 992  | 1007 | 1010 | 1012 | 1013 | 1015 | 1017 | 1019 | 1027 |